

2024



Furbearer Program Annual Report



Missouri Department of Conservation

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Welcome Letter

The Missouri Department of Conservation's Furbearer Program works to monitor and manage the state's furbearing species for the sustainable harvest by hunters and trappers, as well as for the enjoyment of outdoor recreationalists from Missouri and around the country. This is done with the help of the state's hunting and trapping community, volunteers who help run surveys and report sightings, financial support received from the one-eighth of one percent Conservation Sales Tax, permits sales, and income generated by the fish and wildlife tourism. Missouri is fortunate to have a wide range of furbearing species. From the charismatic larger mammals like coyotes and bobcats to the small and rare long-tailed weasel, our natural areas contain many furbearers for us to enjoy.

We would like to thank everyone who has helped us in our efforts. Last year, bow hunters recorded furbearer sightings for over 33,000 hours to help compile our Archer's Index. We received reports of rare furbearer sightings of badgers, least weasels, long tail weasels, and mountain lions. Volunteers helped us with our state-wide Sign Station Surveys. Hunters and trappers provided teeth from harvested bobcats and otters to help monitor the populations.

With everyone's cooperation, we can enjoy seeing and harvesting our furbearing species in the state for generations to come.

Thank you!

-Missouri Department of Conservation Furbearer Program

Annual Highlights

- ❧ Over 90 genetic samples were collected from bobcat mandibles (that were submitted as part of our age-at-harvest study) to be included in a Midwest bobcat genetic study. The results of this study are aimed at evaluating the genetic variation in Midwest bobcat populations.
- ❧ The ongoing mesocarnivore camera trapping study's final field season finished in the spring of 2024. The goal of the study was to detect more spotted skunks and gray fox, to help build distribution models for these two species, and help design a statewide mesocarnivore monitoring plan. Gray fox were detected at a majority of camera arrays compared to spotted skunks that were only detected in Stone County (pictured below) and Reynolds County. Unfortunately, not enough skunks were detected for modeling purposes, but new information about their distribution was gained. Final results from this study are aimed to be finished in 2026.



- ❧ A new record-weight furbearer was harvested during the 2023-2024 season, a nutria from New Madrid County that weighed 19.69 lbs.
- ❧ There are now over 120 confirmed mountain lion sightings across the state. Mountain lion information is no longer included in this annual report, but is provided along with general information about mountain lions on the MDC website ([Mountain Lion Reports | Missouri Department of Conservation](#)).
- ❧ In November of 2024, a deer hunter illegally shot a male mountain lion that was originally marked in central Nebraska as a kitten in 2023. This animal was over 120lbs and in good body condition when killed. This is one of the first marked mountain lions to have been observed in Missouri since mountain lion activity has been tracked starting in 1994.
- ❧ Black bear information is no longer included in this annual report, but information about current monitoring and management activity can be found in our newly established Black Bear Annual Report on the MDC website ([Black Bear Management in Missouri | Missouri Department of Conservation](#)).
- ❧ There were no new wolf confirmations during this reporting period.
- ❧ Check the Department website for additional updates on projects and sightings.

Introduction

Missouri's wild fur market has been monitored annually since 1940, with some information dating back to 1934. Over time, tremendous fluctuations in the harvest of Missouri's primary furbearing species have been observed as both market and social trends have changed. The Missouri Department of Conservation (MDC) monitors the fur market within the state using mandatory fur dealer transaction records, mandatory pelt registration of bobcats (since 1980) and river otters (since 1996), and information gathered at fur auctions. The information in this report is based on the harvest by both trappers and hunters.



The number of Fur Dealer Permits issued by MDC peaked at 1,192 during the 1945-46 trapping and hunting season. In 2024, MDC issued **26 Resident Commercial Fur Buyer Permits**, 5 more than was issued in 2023, and **9 Non-Resident Commercial Fur Buyer Permits**, 5 more than were issued in 2023.



Permits to harvest Missouri furbearers by trapping methods were first required in 1953. The number of Resident Trapping Permits issued peaked during 1980-81 at 13,248 and reached an all-time low in 2000-01 at 2,050 permits issued. During the 2023-2024 trapping season, MDC issued 9,307 Resident and 502 Non-Resident Trapping Permits. That is over 500 more resident permits issued than the previous year, and it is at least the fourth year in a row that we have seen increases in annual trapping permits sold.

The highest peak of total pelts harvested reached 834,935 in 1940-41 (over 70% were opossum and skunk pelts) and reached the second highest peak in 1979-80 at 634,338, when average raccoon pelt values were estimated at \$27.50. The economic value of harvested fur also peaked in 1979-80 when \$9 million worth of pelts were sold. Pelt values declined dramatically during the late 1980s and through the mid-1990s. As a result, the number

of participants also fell to all-time lows. Despite a small peak in the fur market in the mid 2010's, the international fur market is at an all-time low due to declining prices, the disruptive Covid-19 pandemic, and the resulting world-wide recession. Even with recent downward trends in trapping, the 2023-2024 trapping season saw 31,308 animals harvested which is a 5.36% increase compared to the 2022-2023 trapping season (29,714) and a 31.51% decrease from the 2021-2022 trapping season (45,710).

The first section of this annual report describes the methods used to annually monitor the status of furbearer harvest and population trends, which includes tracking furs harvested and sold, monitoring auction prices for common furbearing species, utilizing annual sign station surveys (which have been conducted in 25 counties every year since 1977) and the Archer's Index that are compiled from bowhunter observations (which have been done since 1983). For less common species, public reports of sightings play an important part in tracking frequency and locations of those species across the state.

In Section two, we break down trends in observation of each species based on the results from annual sign stations and archer indices. The use of long-term data sets allows for the comparison from year to year and more importantly the long-term trend of each species. In addition, we provide range maps and recent sightings of our rare furbearer species.

For more information about this report or about the furbearer species mentioned, please contact Nate Bowersock at Nathaniel.Bowersock@mdc.mo.gov or visit www.mdc.mo.gov.



SECTION I: Annual Furbearer Monitoring Methods



Fur Harvest and Auction Price Comparisons

Individuals interested in buying or selling fur in Missouri (i.e., fur dealers) must obtain a commercial permit from MDC. Permit requirements include maintaining and submitting records of all fur transactions (e.g., buying, selling, retaining inventory, etc.). Data collected from fur dealers provide MDC with an estimate of furbearer harvest. Additionally, bobcat and river otter harvest numbers are gathered from mandatory pelt registration and tagging, as required by CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) for export outside the United States.

The Missouri Trappers Association (MTA) hosts fur auctions each year in the state of Missouri, providing an opportunity to buy or sell harvested



pelts. In the 2023-24 season, MTA hosted just one auction in February. Pelt prices are averaged from all fur sold, including green, finished, and damaged furs. This year's MTA auction prices saw some species increase in price while others decreased in price (Table 1).

Overall, average pelt prices increased by about 44.2% from last year (Table 2). All species except opossums, mink, gray fox, and bobcat showed an increase in average pelt prices. The largest increase in price from the previous year was raccoons, that went from \$1.53 in 2023 to \$5.55 in 2024, for an increase of 262.7%. Fur auction prices are closely monitored because fur harvest closely correlates with fur prices set at auction. Although these increases will be good for trappers, the overall fur market remains down significantly from its peak with no immediate

changes in the future.



Table 1. Furbearer harvest and pelt prices in Missouri, 2021-2024.

Species	2023-2024		2022-2023		2021-2022	
	Pelts sold ¹ or registered*	Pelt Prices from MTA Auctions ²	Pelts sold ¹ or registered*	Pelt Prices from MTA Auctions ²	Pelts sold ¹ or registered*	Pelt Prices from MTA Auctions ²
Raccoon	11,576	\$2.96	11,196	\$1.53	19,770	\$3.33
Opossum	741	\$1.47	884	\$2.05	689	\$2.91
Muskrat	4,085	\$2.51	4,908	\$3.35	11,273	\$4.61
Coyote	1,262	\$6.81	1,997	\$7.52	5,841	\$10.75
Beaver	9,340	\$15.45	6,707	\$12.51	4,555	\$8.14
Mink	298	(m) \$10.36 (f) \$7.33	985	(m) \$10.67 (f) \$7.00	345	(m) \$8.28 (f) \$7.00
Red Fox	584	\$15.22	572	\$14.72	436	\$11.24
Gray Fox	708	\$19.52	723	\$16.09	216	\$19.90
Striped Skunk	424	\$16.05	306	\$11.34	222	\$10.41
Badger	10	\$36.25	7	\$26.11	18	\$25.00
Bobcat*	1,321	\$85.55	793	\$90.53	1,314	\$46.01
River Otter*	1,238	\$28.88	636	\$30.47	1,031	\$27.97
Trapping permits issued	9,307		9,822		8,410	

¹ Number of pelts sold is based on reports received from 36 Fur Dealer Permittees.

² Pelt prices are averaged from all fur sold, including green, finished, and damaged furs.

* Bobcat and River Otter harvest numbers are based on CITES registration.

Table 2. Furbearer pelt prices in Missouri from the annual Missouri Trappers Association Fur Auction, February 24, 2024, Montgomery City, Missouri.

Species	2024 Summary		Change from 2022-2023	Change from 2012-2013 (Peak)	5-year average (2019-2024)
	Total Sold	Avg. Price			
Raccoon	1,055	\$5.55	262.7%	-73.3%	\$3.77
Opossum	223	\$2.04	-0.5%	63.2%	\$1.97
Muskrat	893	\$4.20	25.4%	-64.4%	\$3.68
Coyote	177	\$9.03	20.1%	-59.4%	\$13.73
Beaver	567	\$26.70	113.4%	22.9%	\$12.69
Mink	16	\$6.02	-31.9%	-75.0%	\$6.46
Red Fox	50	\$18.61	26.4%	-52.4%	\$12.87
Gray Fox	31	\$15.40	-4.3%	-55.6%	\$15.20
Striped Skunk	66	\$12.11	6.8%	272.6%	\$9.96
Badger*	1	\$47.50	81.9%	12400.0%	\$26.96
Bobcat	92	\$80.35	-11.2%	-30.4%	\$56.38
Otter	171	\$43.31	42.1%	-49.4%	\$27.58

* Change in Badger pelt price is artificially inflated because average pelt price in 2012-2013 was \$0.38 and very few pelts were sold.

Archer's Index of Furbearer Populations

Missouri Department of Conservation has conducted annual surveys of wildlife populations via the Bowhunter Observation Survey for 41 consecutive years (1983-2024). Each fall, several thousand archery deer and turkey hunters keep daily observation records of furbearers, other small game animals, deer, and turkeys. Archers volunteer through post-season surveys that are advertised in articles in the *Missouri Conservationist* magazine, during sign-ups at bowhunter club meetings, and at other outdoor events. Archery hunters are asked to record the number of hours hunted, during both morning and evening hunts, and to use a standardized daily diary to record hours and sightings of wildlife. MDC uses the number of sightings of each species divided by the total number of hours hunted statewide to calculate a sighting index which is expressed as sightings per 1,000 hunter hours, called the Archer's Index.



Wildlife population indices calculated from archers' diaries are useful trend indicators for terrestrial wildlife species, such as coyotes, raccoons, foxes, and bobcats. Hunters are well distributed statewide, with volunteers in all counties during most years. Bowhunters averaged 55,895 hours per year in the stand over the last 39 years and ranged from 30,990 hours in 1985 to 98,898 hours in 2017 (See Appendix A). In 2024, hunters spent **33,896 total hours** in hunting stand.

Line graph representations of Archer's Indices for several furbearer species are shown in Section II by species. Based on these indices, long-term raccoon, coyote, and opossum observations suggest population increases. Striped skunk and bobcat populations are relatively steady, while observations suggest a downward trend for red and gray fox populations. Wildlife population indices are also depicted by county in Appendix B.

Furbearer Sign Station Survey

Beginning in 1977, annual sign station surveys for furbearers have been conducted each September and October. The purpose of the survey is to collect population trend information for Missouri's furbearing species. Twenty-five routes are distributed throughout the state in 25 different counties. Routes consist of 5 segments with 10 sign stations per segment for a total of 50 stations per route. Each sign station is a 36-inch diameter circle of sifted soil, spaced 0.3 miles along public gravel road shoulders. A fatty acid scent disc is placed in the center of each station as an attractant. Each station is operated for one night and evaluated the following day for visitation.

Each station is described as operable or inoperable by the observer, stations with tire tracks or those destroyed by a road grader were deemed inoperable. All operable stations were included in calculations of indices, regardless of track presence, but inoperable stations were not used for calculations. Tracks were

identified within the 36-inch circle of the station. Occupancy of a station by a species was recorded, but not the number of individuals per species.

A total of 21 routes out of 25 (Figure 1) were completed in 2024 with a total of 849 operable stations out of a possible 1,200 stations. Fair weather in September and October allowed many of the surveys to be complete before inclement weather set in November. The most common species to visit stations were raccoons, opossums, coyotes, and deer which is similar to our results from previous years (Figure 2). The least common were gray fox, bobcats, mink, muskrats, weasels, spotted skunks, badgers, and bears. Non-mammalian visitors were primarily birds, such as crows and turkeys. Species-specific population index trends from 1977 to 2024 based on the Furbearer Sign Station Surveys and other monitoring efforts are displayed in Figures 6 through 28. Most furbearers had an overall increasing trend except for red and gray fox populations, which have been in an overall decline since the initiation of the Sign Station Survey (Figures 6, 10, 14, 20, 21, 24, 28). These trends are also reflected in the Bowhunter Observation Index and harvest records. We have seen a decline in the number of visits by bobcats over the last 10 years; however, the overall trend is still positive. Small mammal populations frequently see changes year by year depending on variables such as food abundance, predator population size, and many other ecological variables. For management purposes, the long-term trends are the main indicator of a population's stability and there are no signs of alarming drops in these species.



An example of a sign survey station.



Striped skunk tracks found in a sign.

Volunteers greatly assisted MDC staff to complete the surveys again this year, and we want to say thank you to all of our volunteers. Missouri Master Naturalists assisted with completing surveys. Also, students from several universities helped with surveys: Missouri Western State University - Worth and Andrew Counties, College of the Ozarks - Ozark County, and University of Missouri - Boone County.

Online training as well as in-person training was provided to give specific instructions and provide wildlife track identification training. Volunteers were able to observe bobcat and fox prints along with more common species like raccoon and opossum. After volunteers first assisted in surveys in 2019, the expansion to use more volunteer help has greatly reduced the pressure on MDC staff to complete this large-scale survey. Their help has been greatly appreciated, and we expect to continue to use volunteer help in future surveys.

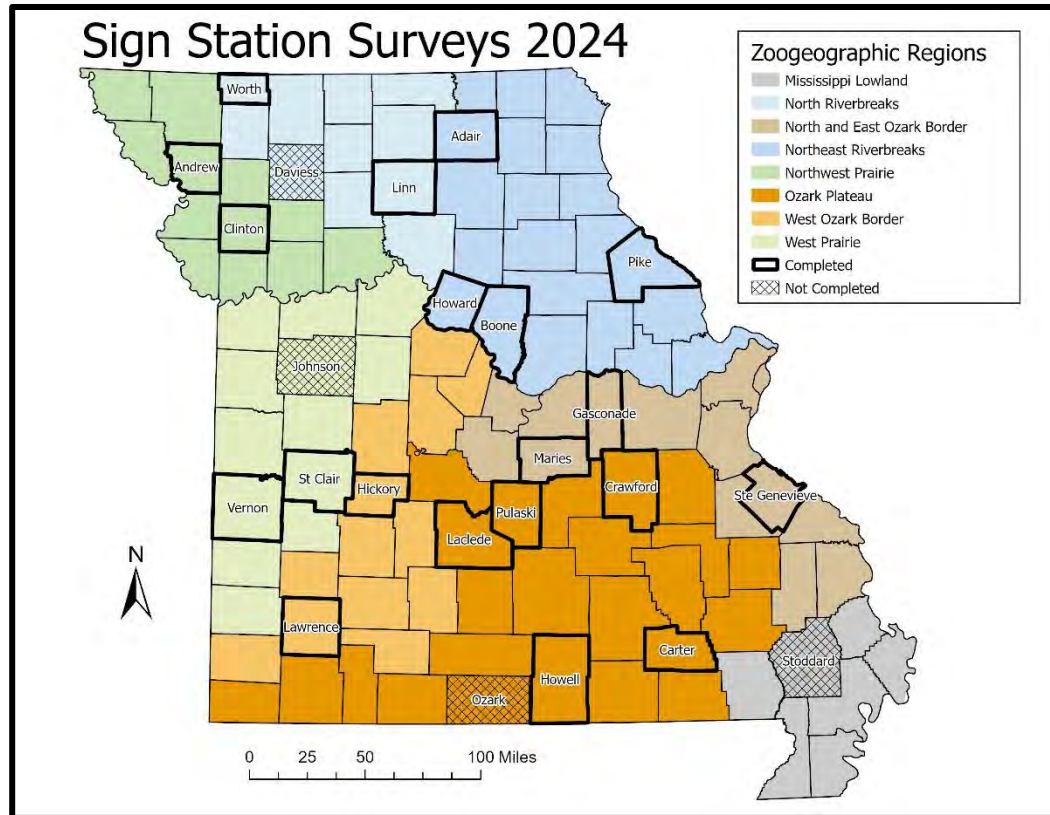


Figure 1. Missouri's 8 zoological regions and counties where data were collected (bolded); all counties with permanent transects were surveyed in 2024, except Daviess, Johnson, Ozark, and Stoddard.

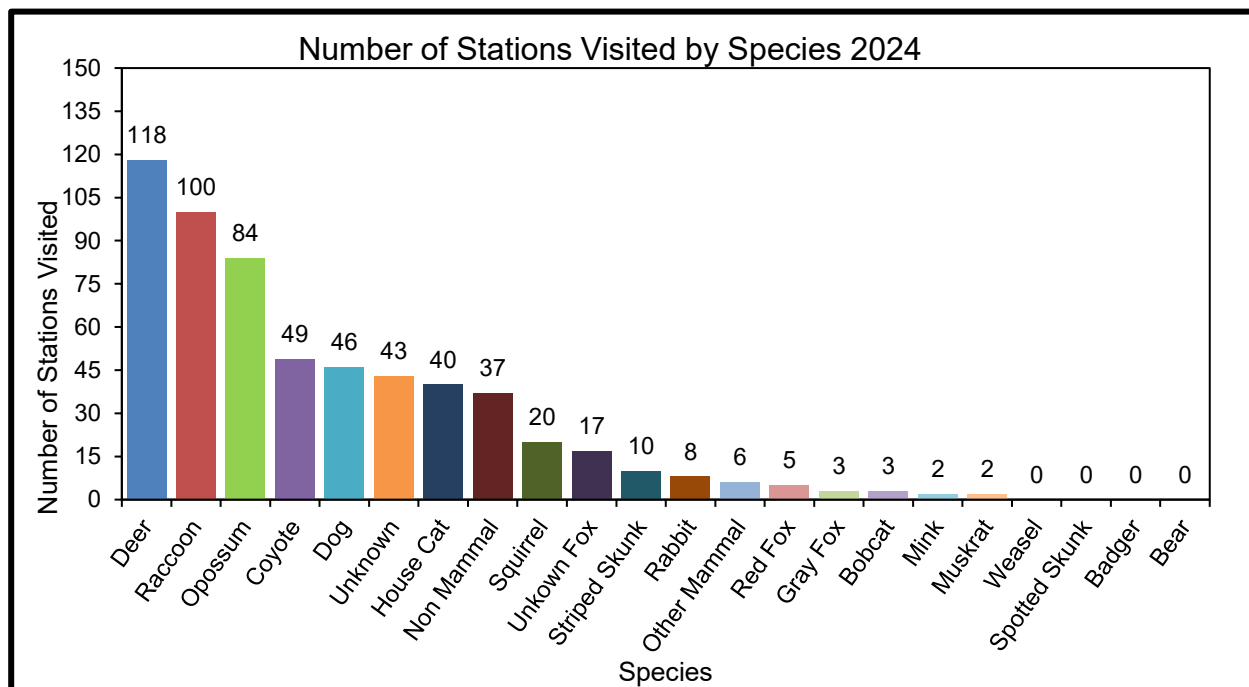


Figure 2. The number of stations visited by each mammal species, including non-furbearer species, out of 849 operable stations in the 2024 Missouri Furbearer Sign Station Survey.

Monitoring and Demographic Assessment of River Otters and Bobcats in Missouri



River otter and bobcat are commonly sought-after furbearers in Missouri, and there are no harvest level restrictions on either species. Various population indices suggest these species are not in danger of being overharvested. However, both bobcats and otters are CITES listed species, as their furs resemble other exotic endangered species, which has resulted in challenges to their harvest regulation in several states. The MDC began a research project to document the sex and age of harvested animals and measure harvest effort by trappers

for these species. These and other data will enable MDC to utilize Statistical Population Reconstruction (SPR) to generate abundance estimates and measure the impact of harvest and regulations on river otter and bobcat populations. Through SPR, the MDC will have a better understanding of the relationship between harvest rates and demographics of each species and will be able to better support current harvest regulations if challenged in the future.

To utilize SPR, MDC collects information on harvested river otters and bobcats through mandatory registration and voluntary tooth submission. Trappers are asked to remove one of the lower canine teeth from each river otter or bobcat they harvest so that age-at-harvest can be determined. Sex, date of harvest, method, and effort are collected when river otter or bobcat are tagged or registered with the Department.

A total of 106 otter lower canine teeth from the 2023-2024 harvest season and several teeth from previous harvest seasons (not depicted below) were collected and have been analyzed and sent for age analysis. The bobcat jaws from the 2023-24 season are in process of being analyzed.



River Otter Pilot Project

Starting in December of 2023, the Furbearer Program started testing a new transmitter to track river otter survival and harvest rates, using a GSM (Global System for Mobile Communication) transmitter. Traditionally, river otters are tracked with internally implanted VHF radio transmitters, which require field crews to track marked animals on a daily basis from the ground or air. There have been some attempts to use GPS units to track otters, which would save time in having to locate animals regularly, but the external components that are required for GPS do not last long on otters due to their great dexterity. GSM transmitters, which are typically used by cell towers to transmit location information of cell phones, have recently been used to track wildlife species. For most GSM tracking devices, a GPS unit is required to identify the exact location of a device. However, even without a GPS unit, if a GSM is detected by a cell tower, information such as tower location and signal strength can be collected, which can still be used to estimate a coarse location. Given the wide extent of cell towers on the landscape, the furbearer program decided to test the effectiveness of GSMs to track river otters.

Between December 2023 to May 2024, 8 river otters (6F, 2M) were successfully captured and implanted with GSM/radio transmitters in Boone and Randolph Counties. Throughout 2024, otters were tracked from both the air (from a helicopter) and ground, and most otters were located on multiple occasions. Initial results suggest the GSMs were not as effective at detecting otters as hoped but did help detect some otters that field and air crews struggled to locate. Crews will continue tracking otters until mid-2025, when transmitters are expected to run out of battery life. The results of this pilot study will be used to inform a large river otter survival and harvest rate study that will be implemented beginning in the Fall of 2025.



Helicopter telemetry flight searching for radio marked river otters in Eagle Bluffs Conservation Area, MO, 2024.



Furbearer program assistant radio tracking marked river otters in Eagle Bluffs Conservation Area, MO, 2024.

SECTION II: Missouri Furbearer Status 2022 - 2023

Raccoon Harvest and Population Trends

Raccoon harvest records based on fur buyers' records in 2023-2024 totaled 11,576 and included individuals harvested by both trapping and hunting methods (Figure 3). This year's harvest was up 3.39% from last year's harvest of 11,196. This year's pelt prices are up 262.7%. The 2022-2023 season resulted in the lowest raccoon harvest to date but increased slightly in the 2023-2024 season. Before that, 1942 was the lowest recorded season for raccoon harvest. Average raccoon pelt prices are down 73.3% from the last price peak in the 2012-2013 season. Reported raccoon harvest via the biannual small game survey (survey sent out to all small game hunters every other year) shows that raccoon harvest was up again from previous years.



Population trends are derived from the Archer's Index Survey and the Sign Station Survey. For a detailed description of these surveys, see Section I of this report. During the hunting season of 2024, bowhunters submitted the number of raccoons observed during archery hunting hours and the number of hours spent afield. Based on these observations, the number of raccoons sighted per 1,000 hours decreased by 15% to 45.4 in 2024 and from 49.3 in 2023 (Figure 5). Presence of raccoon tracks at furbearer sign stations decreased to an index of 117 in 2024 from 192 in 2023 (Figure 6). Indices derived from Bow Hunter Observation Surveys and Sign Station Surveys indicate an overall increasing trend in raccoon population abundance. Short-term fluctuations are normal and expected due to the dynamic nature of raccoon populations. Based on harvest and pelt prices of previous trapping and hunting seasons, harvest pressure is expected to remain stable for the 2024-25 season.

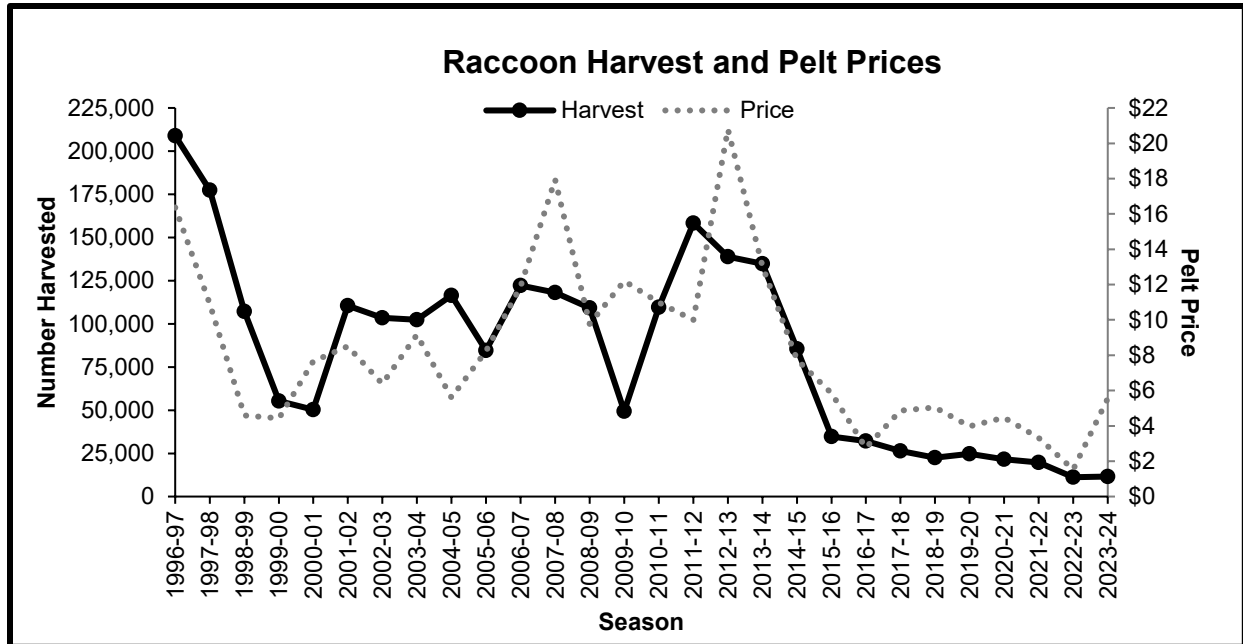


Figure 3. Comparison of Missouri raccoon harvest and pelt prices since 1996. Harvest estimates are derived from fur buyer records. Annual pelt prices are the average price from the Missouri Trappers Association Fur Auction.

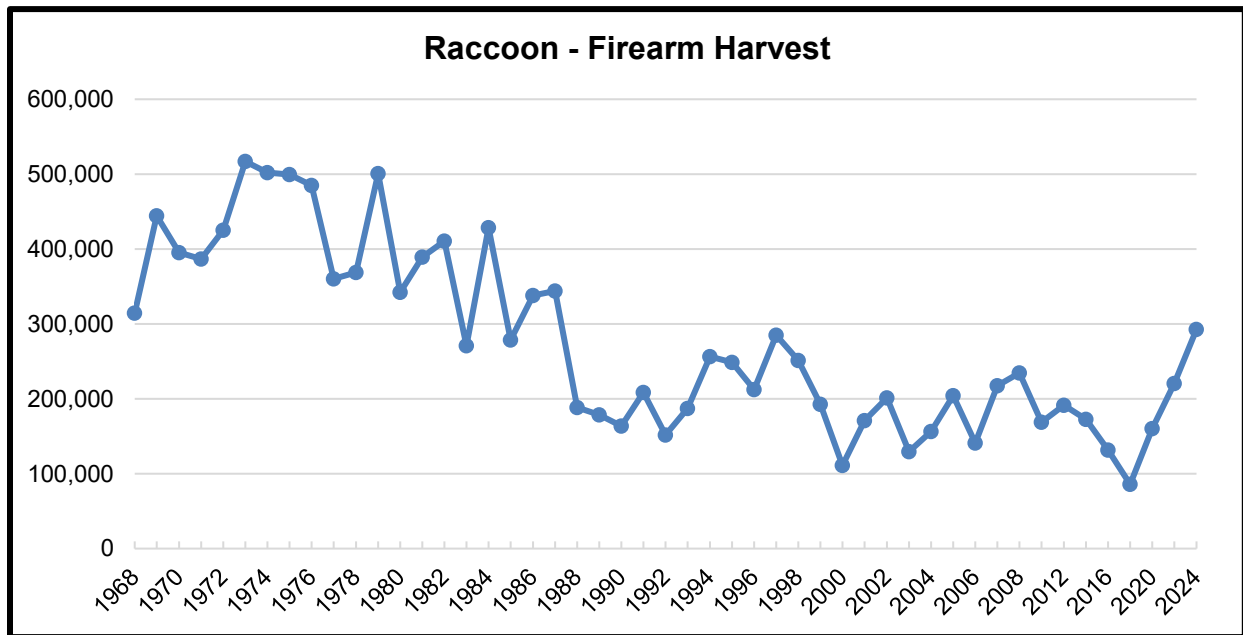


Figure 4. Raccoon harvest via firearm reports through biannual small game survey from 1968-2024.

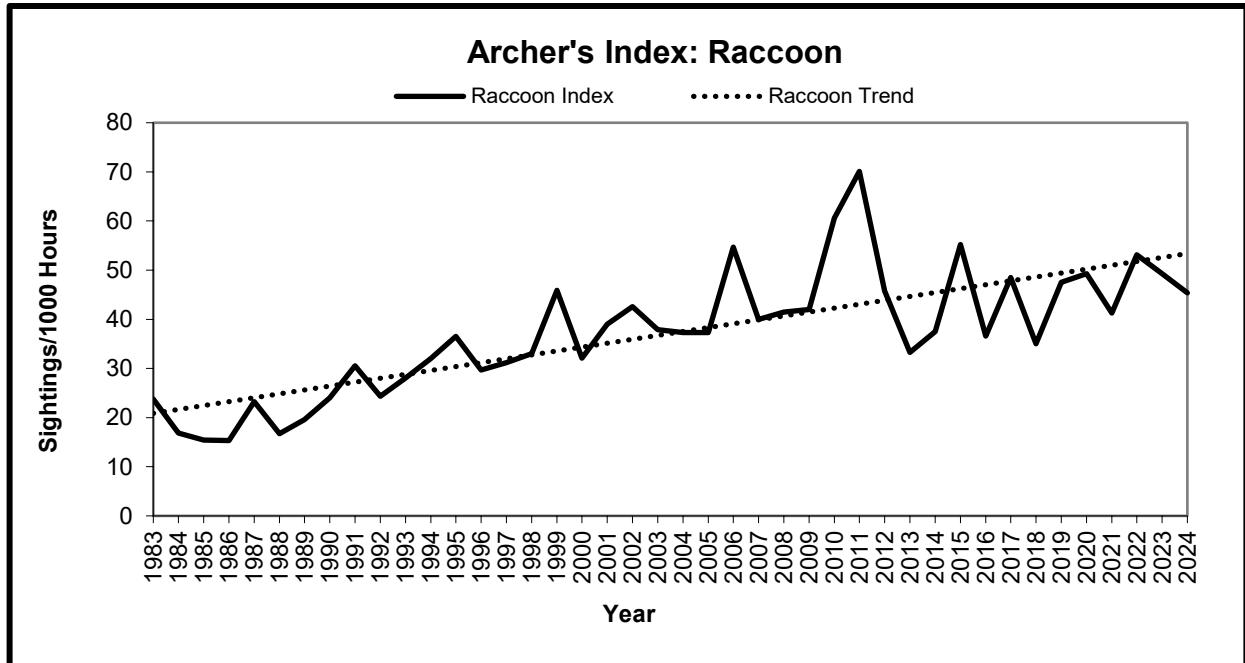


Figure 5. Missouri raccoon population trends based on the Archer's Index, derived from the MDC Bowhunter Observation Survey.

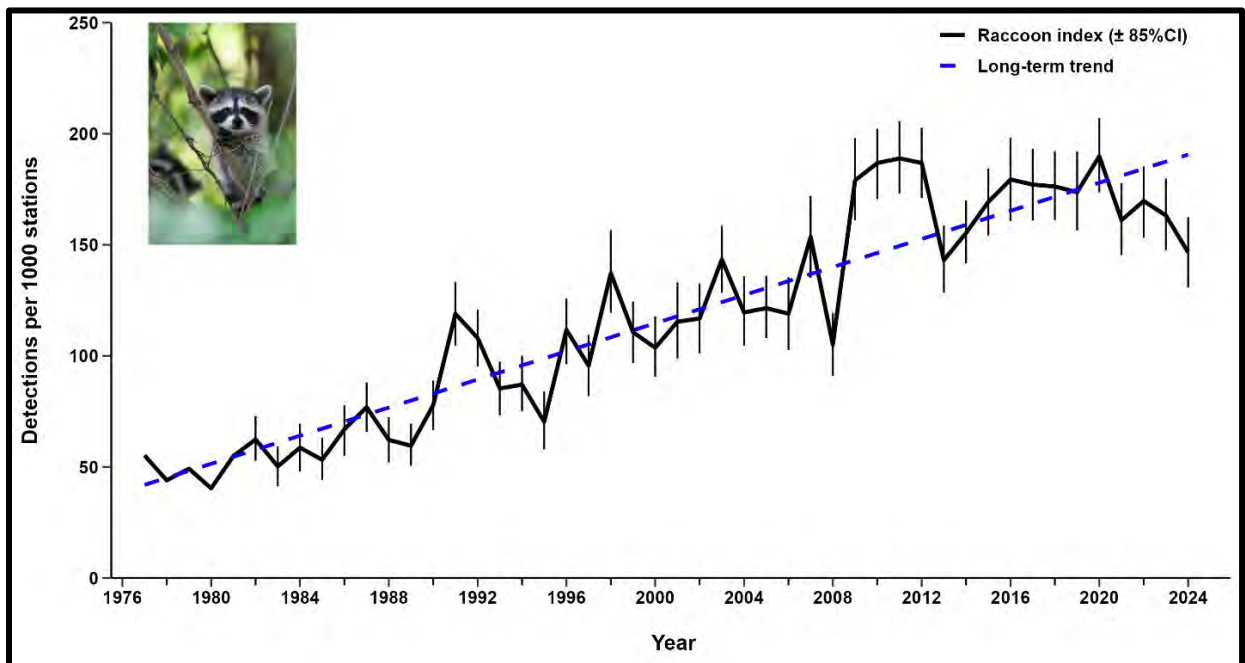


Figure 6. Missouri raccoon population trends based on the Furbearer Sign Station Survey Index.

Virginia Opossum Harvest and Population Trends

The Virginia opossum harvest in 2023-2024 totaled 741 (Figure 7). This year's harvest was down 16.18% from last year's harvest of 884 individuals (Figure 8). Average Virginia Opossum pelt prices for 2023-2024 increased 0.5% to \$2.05 from 2022-2023 season's \$2.04 (Figure 7).



Population trends are derived from the Archer's Index and Sign Station Survey. Based on bowhunter observations, the number of Virginia opossums sighted per 1,000 hours decreased by 10% to 7.0 in 2024 from 7.8 in 2023 (Figure 9). Similarly, the presence of Virginia opossum tracks at furbearer sign stations decreased to an index of 98.9 in 2024 (Figure 10). However, the long-term population trend data from surveys suggests populations are stable and increasing slightly over time.

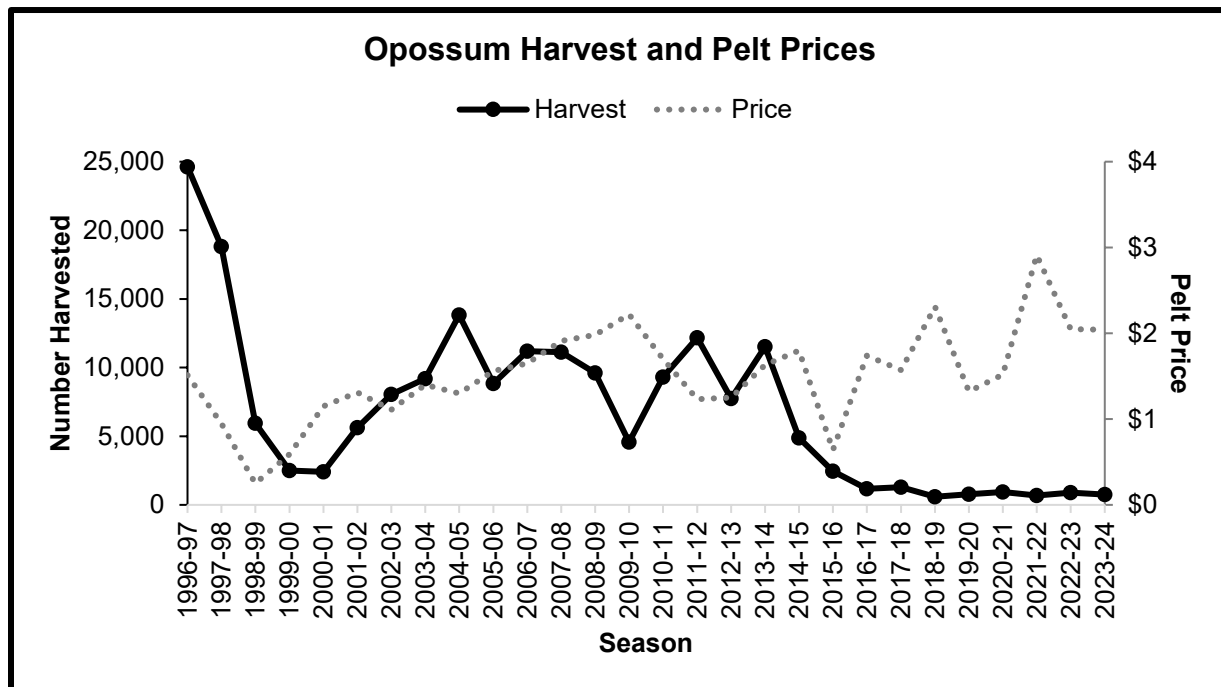


Figure 7. Comparison of Missouri Virginia opossum harvest and pelt since 1996. Harvest estimates are derived from fur buyer records. Annual pelt price estimates are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

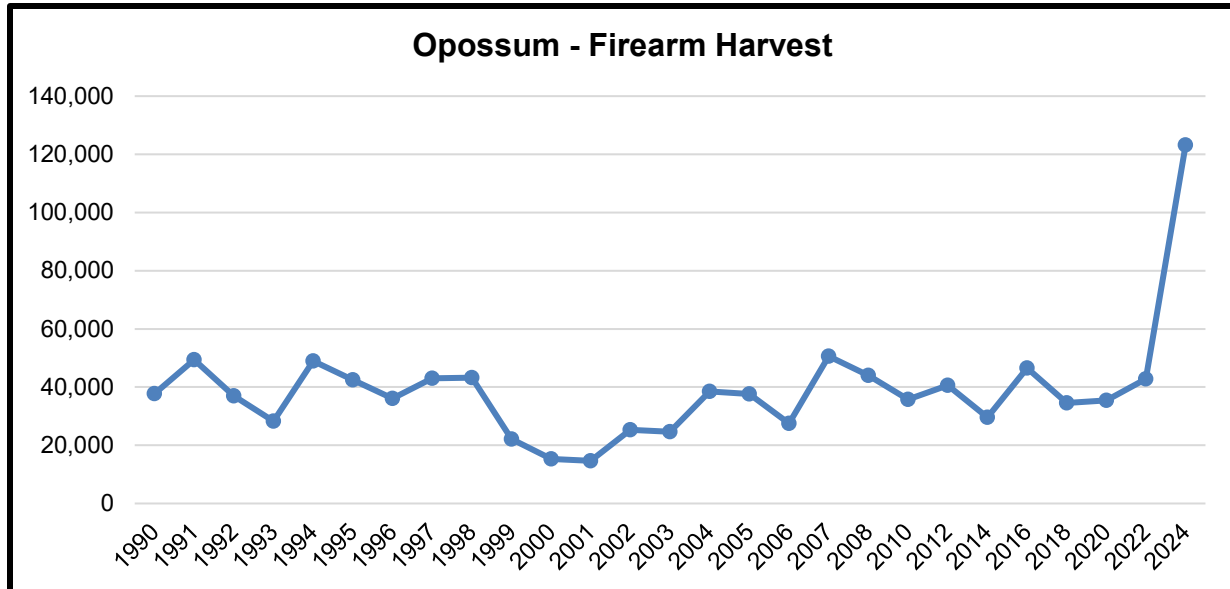


Figure 8. Missouri Virginia opossum harvest via firearm reports through biannual small game survey from 1990-2024.

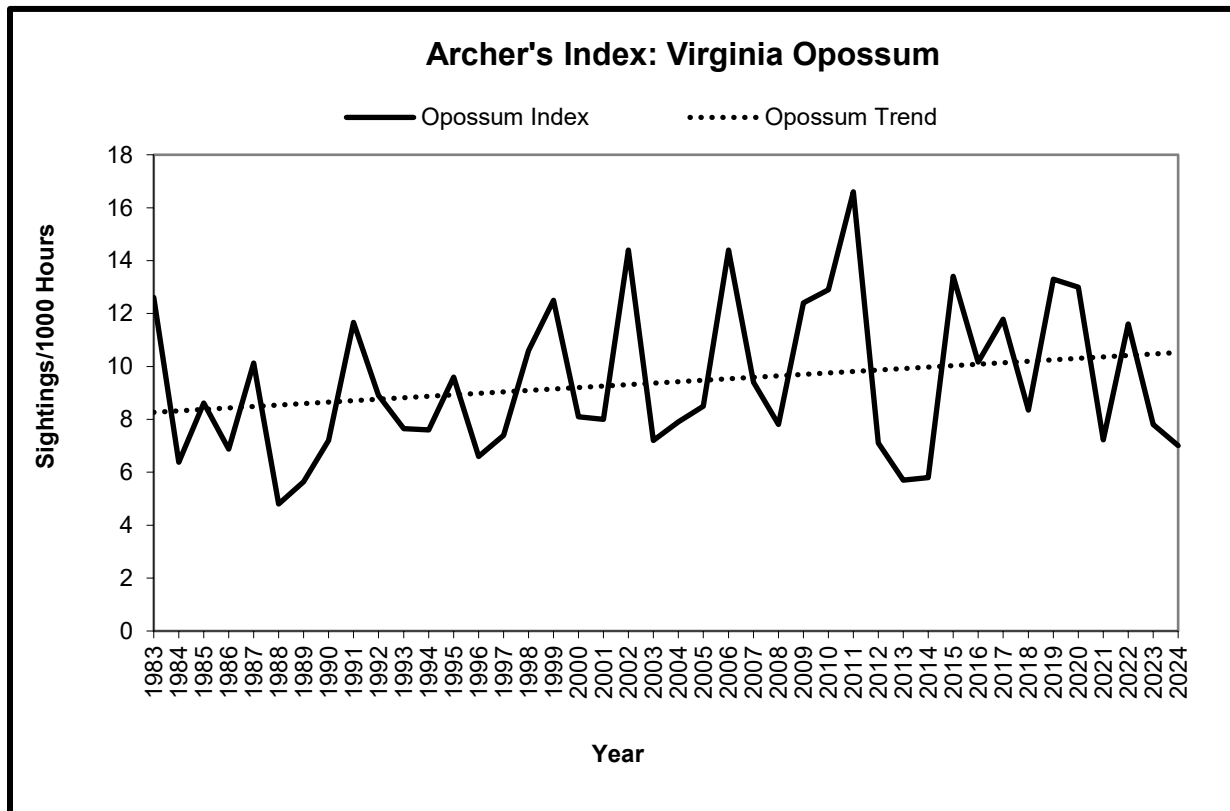


Figure 9. Missouri Virginia opossum population trends based on the Archer's Index, derived from the MDC Bowhunter Observation Survey results for Virginia Opossum, 1983-2024.

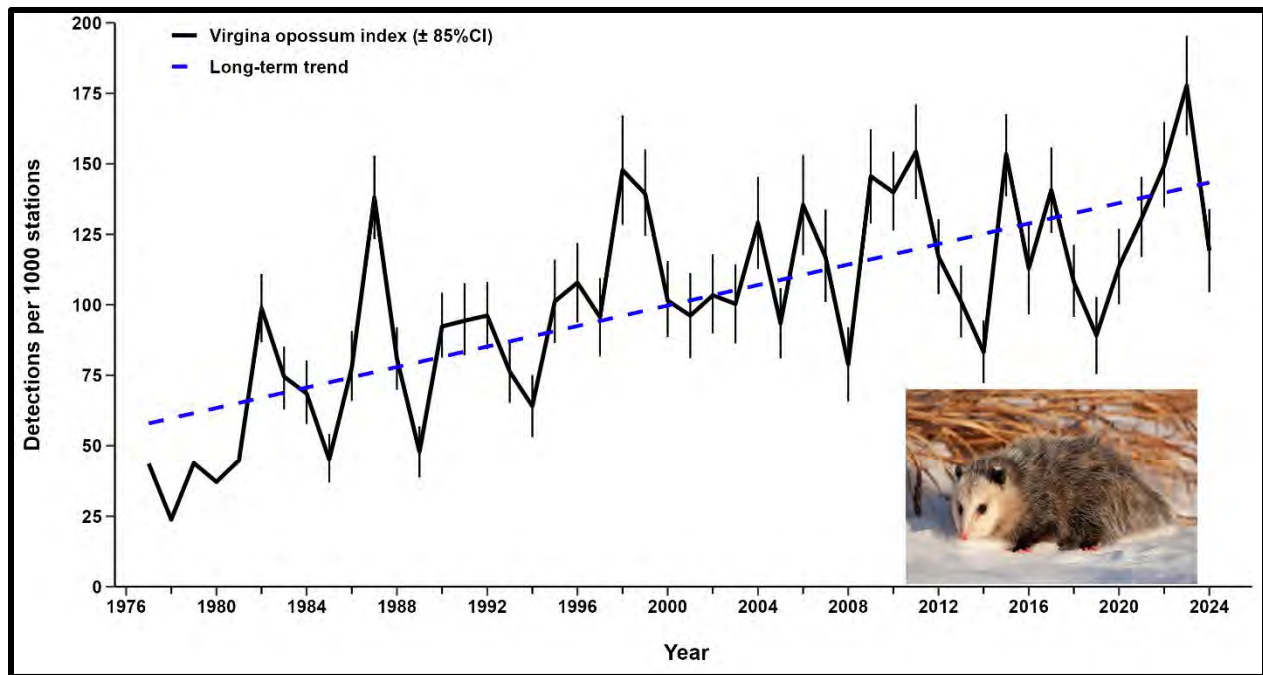


Figure 10. Missouri Virginia opossum population trends based on the Furbearer Sign Station Survey Index, 1976-2024.

Coyote Harvest and Population Trends

Coyote harvest, based on Commercial Fur Buyer reports, during the 2023-2024 furbearer season, 1,262 coyotes were harvested. This total was down 36.81% from the 2022-2023 season with 1,997 individuals harvested (Figure 11) but we did see an increase in hunter harvest of coyotes (Figure 12). Predator hunting continues to increase in popularity, and survey data suggest over 25,000 people hunt coyotes annually. Many trappers enjoy the challenge of catching coyotes, and this is reflected in the harvest totals. Coyote pelt prices averaged \$9.03 this year with an increase of 20.1% from the previous season's \$7.52. Coyote pelts are becoming increasingly popular in the international fur market, which may influence the local market for this species (NAFA, 2019; FHA, 2019).



Population trend data from the Archer's Index (Figure 13) and Sign Station Survey (Figure 14) for coyotes suggest populations are currently stable with an overall increasing trend since the 1970s when the Sign Station Survey began and the early 1980s when the Archer's Index began. Based on bowhunter observations, the number of coyotes sighted per 1,000 hours increased slightly from 22.0 in 2023 to 22.9 in 2024. Presence of coyote tracks at furbearer sign stations decreased to an index of 57.7 in 2024 from 86.8 in 2023.

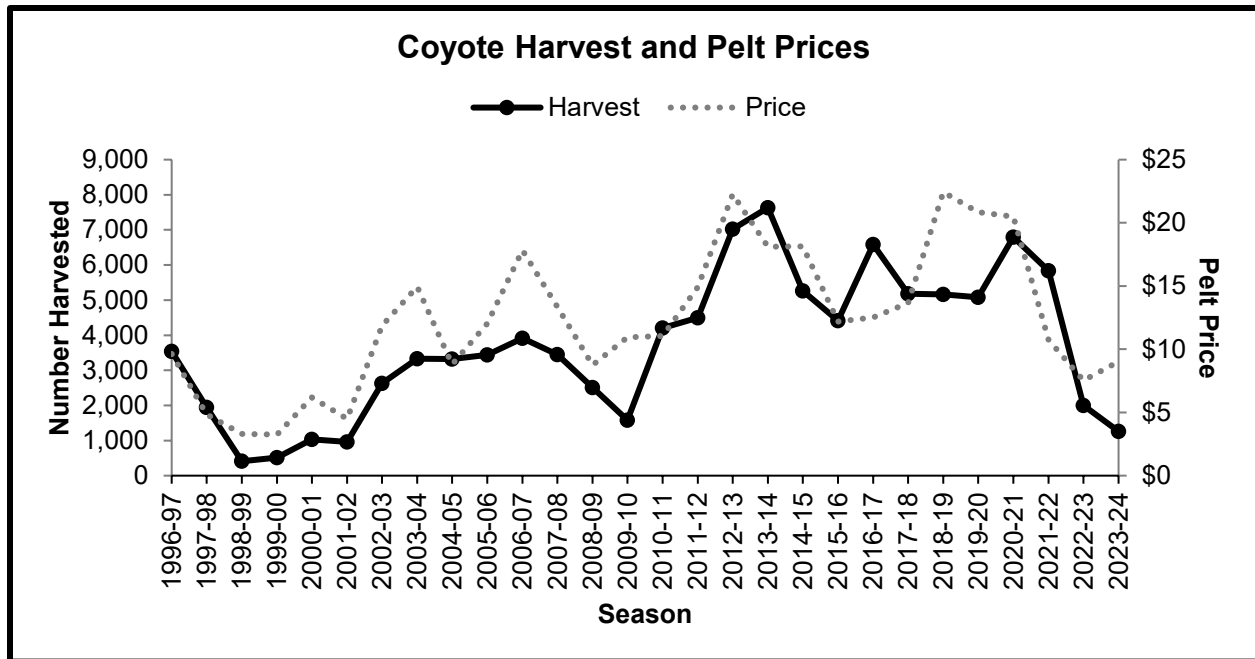


Figure 11. Comparison of Missouri coyote harvest and pelt prices since 1996. Harvest estimates are derived from fur buyer records. Annual pelt price estimates are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

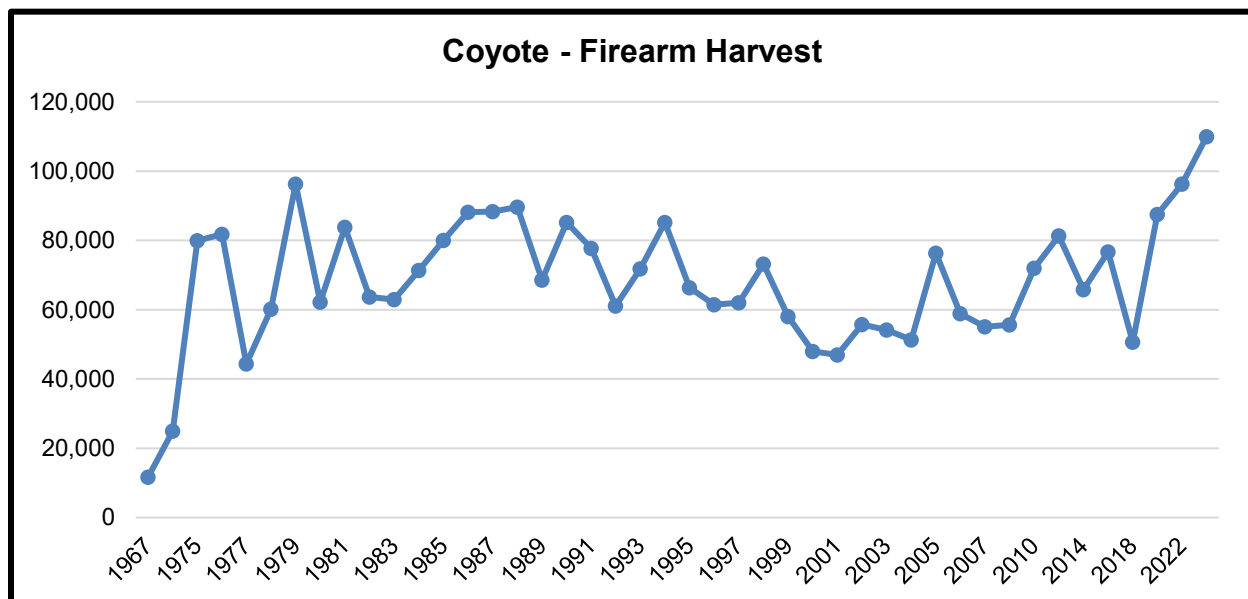


Figure 12. Missouri coyote harvest via firearm reports through biannual small game survey , 1967-2024.

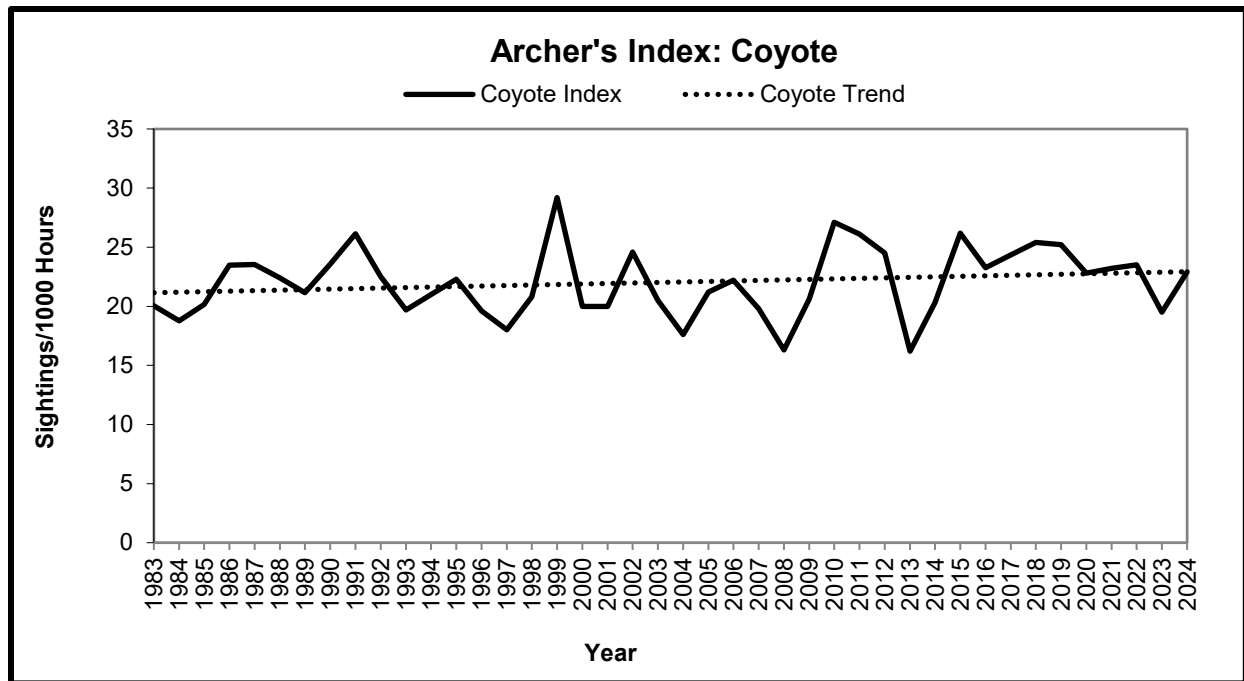


Figure 13. Missouri, coyote population trends based on the Archer's Index, derived from the MDC Bowhunter Observation Survey, 1983-2024.

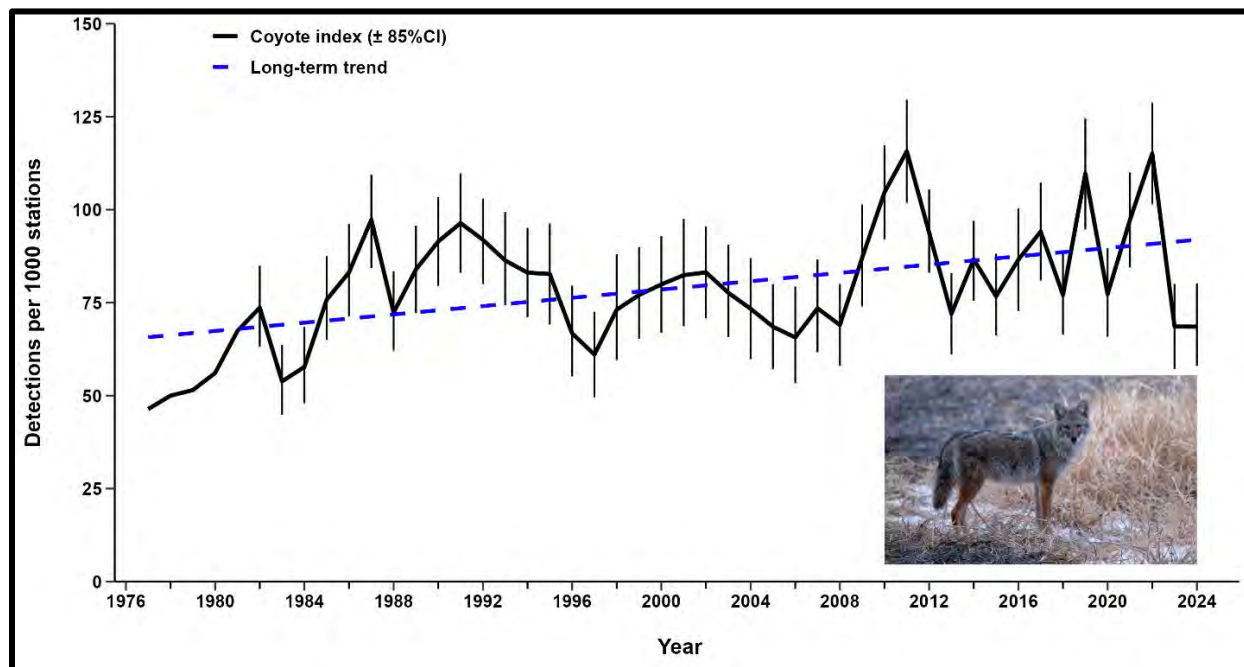


Figure 14. Missouri coyote population trends based on the Furbearer Sign Station Survey Index, 1976-2024.

Fox Harvest and Population Trends

Red fox harvest during the 2023-2024 season increased 2.1% from 572 to 584 individuals harvested (Figure 15). The average price for red fox pelts increased by 26.4% to \$18.61 from 2022-2023 season's \$14.72. **Gray Fox Harvest** decreased slightly in 2023-2024 by 2.07% to 708 individuals compared with last year's harvest of 723 (Figure 16). The average price for gray fox pelts decreased by 4.3% from 2022-2023 season's \$16.09 to \$15.40. For both species of fox there was a small decline in observed firearm harvest (Figure 17, 18).

Population trends are derived from the Archer's Index and Sign Station Survey. Bowhunter observations and sign station surveys offer a long-term perspective suggesting declines in both red and gray fox populations (Figures 19 -21). Long-term fox population declines may be the result of interspecific competition with coyotes and bobcats. Another possible strain on gray fox populations is the increasing population of raccoons and the associated distemper virus, for which gray fox may be particularly vulnerable. Regional variability in fox abundance likely occurs, including around suburban areas where foxes may seek refuge from coyotes or respond to increased prey availability, but the overall long-term trend for both fox species indicates a decline in abundance.



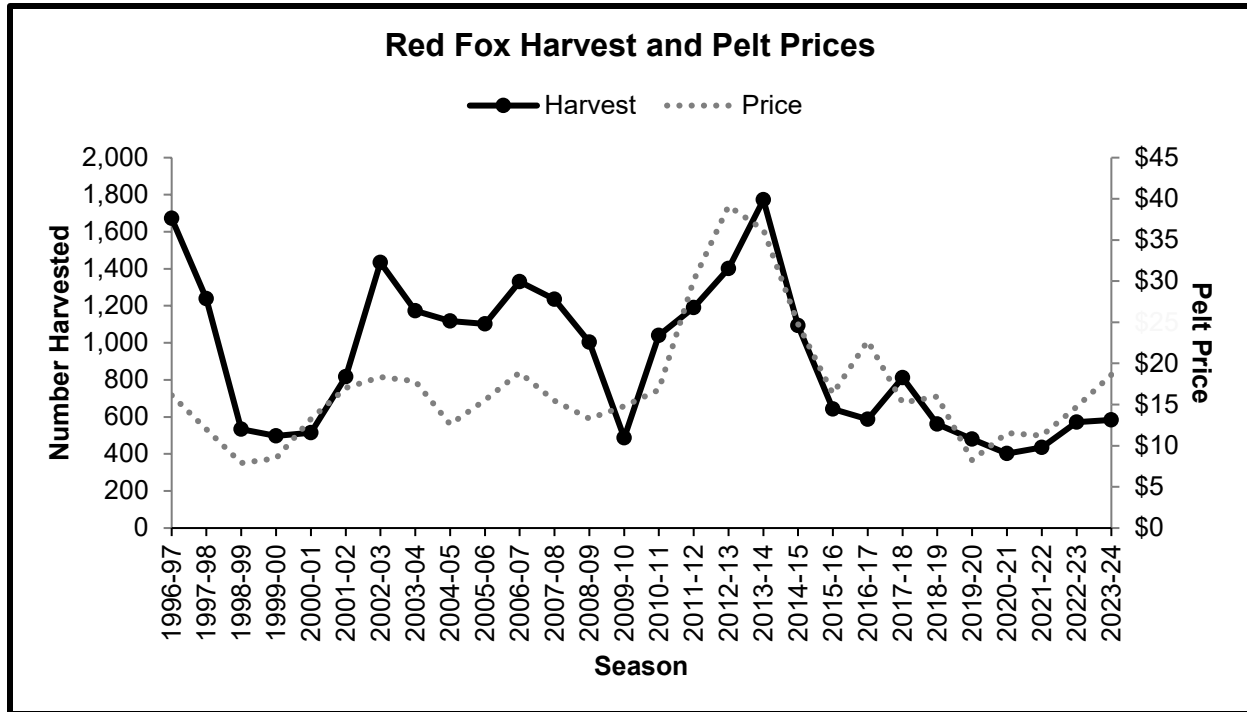


Figure 15. Comparison of Missouri red fox harvest and pelt prices since 1996. Harvest estimates are derived from fur buyer records. Annual pelt price estimates are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

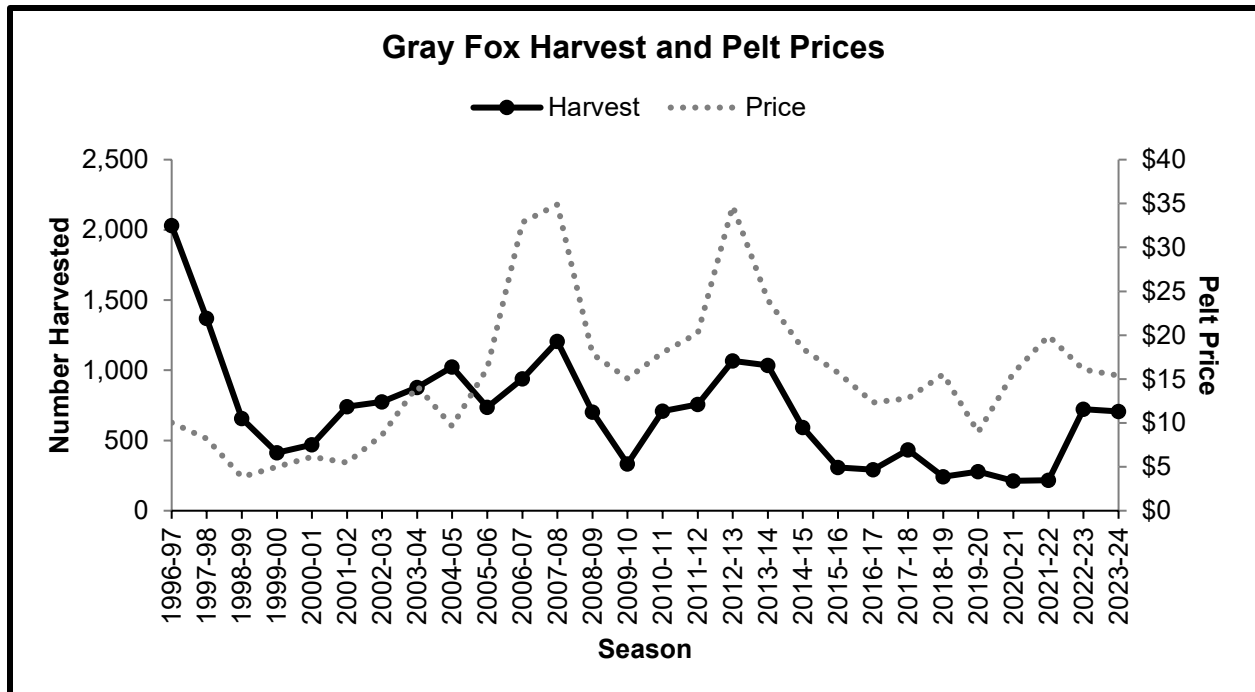


Figure 16. Comparison of Missouri gray fox harvest and pelt prices since 1996. Harvest estimates are derived from fur buyer records. Annual pelt price estimates are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

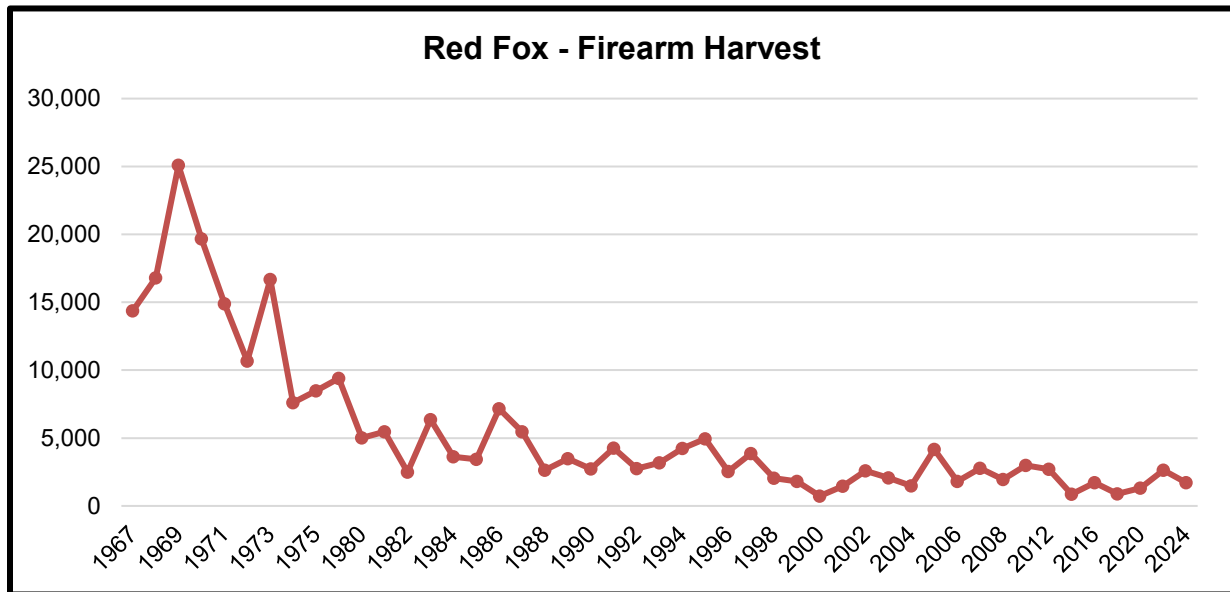


Figure 17. Missouri red fox harvest via firearm reports through biannual small game survey, 1967-2024.

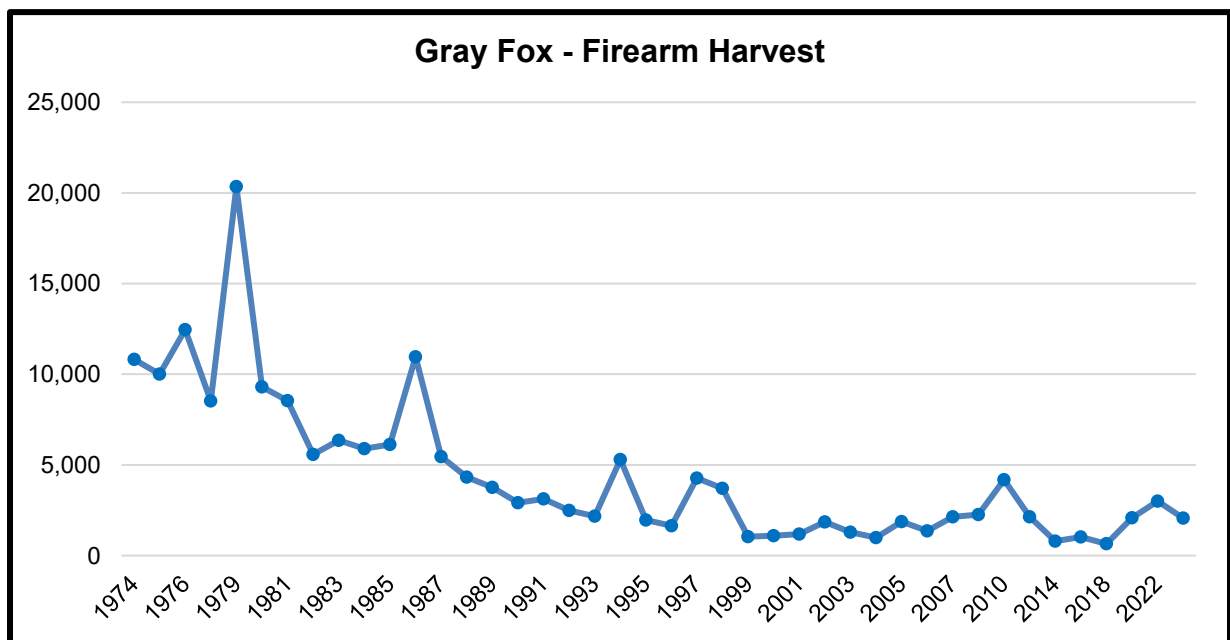


Figure 18. Missouri gray fox harvest via firearm reports through biannual small game survey, 1974-2024.

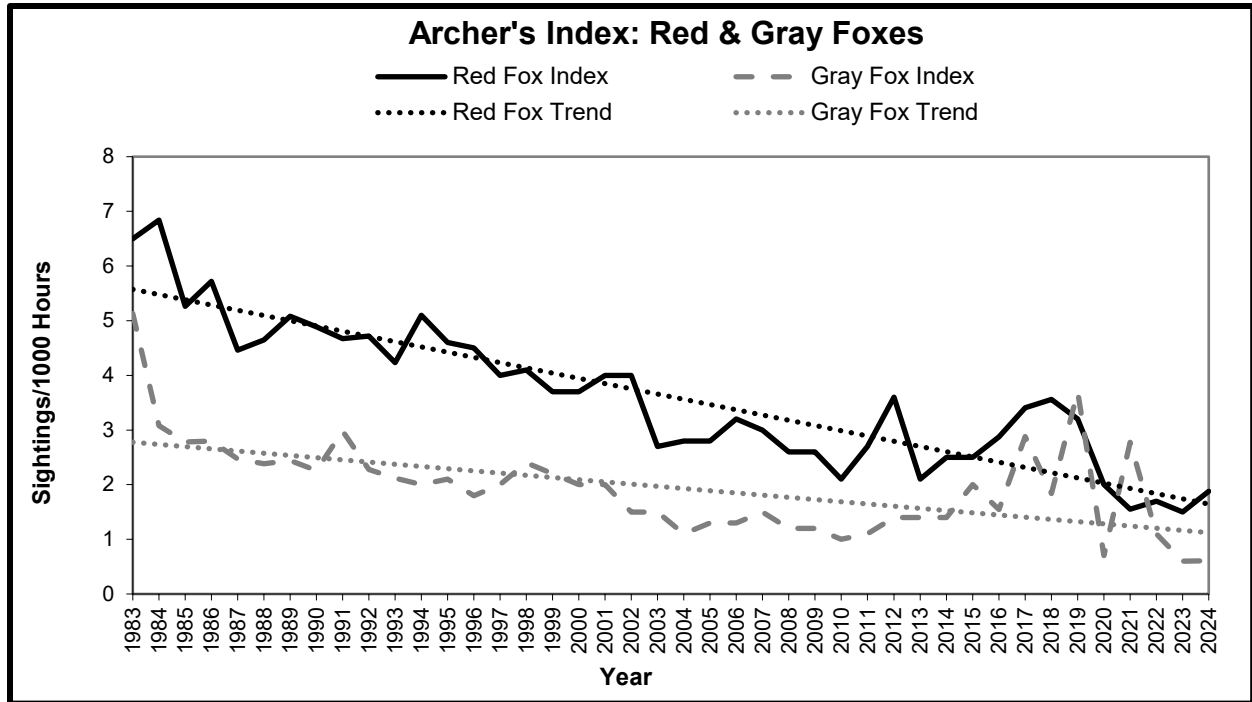


Figure 19. Missouri fox population trends based on the Archer's Index, derived from the MDC Bowhunter Observation Survey, 1983-2024.

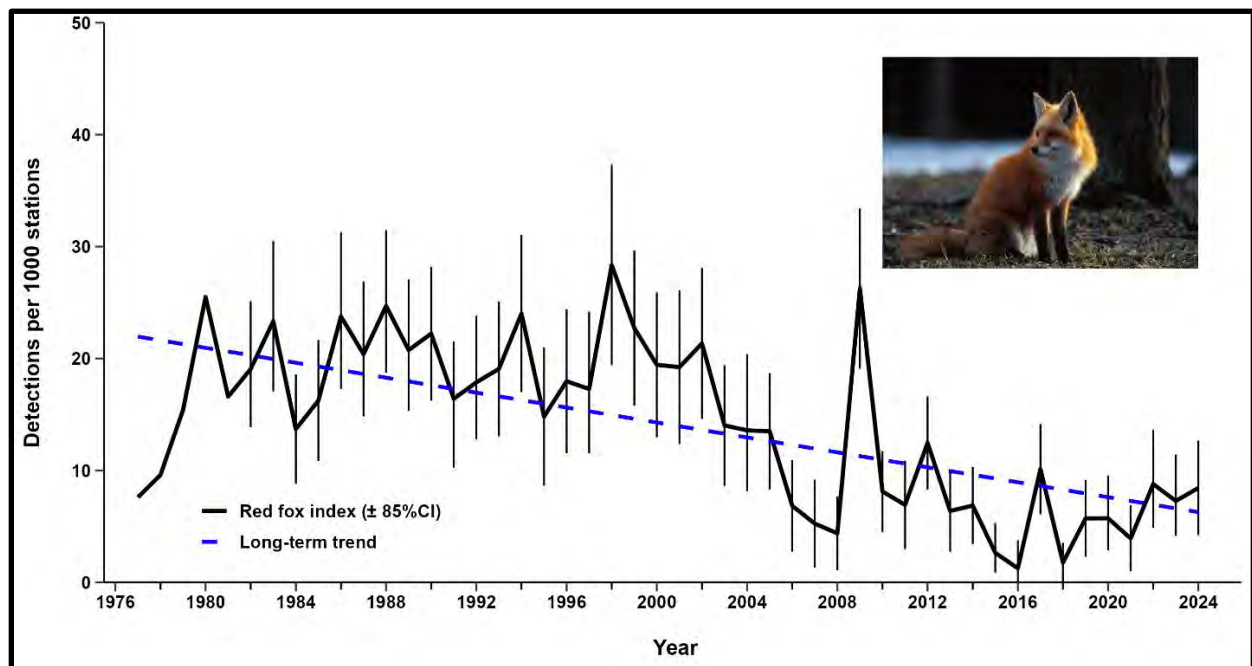


Figure 20. Missouri red fox population index trends, 1978 to 2024.

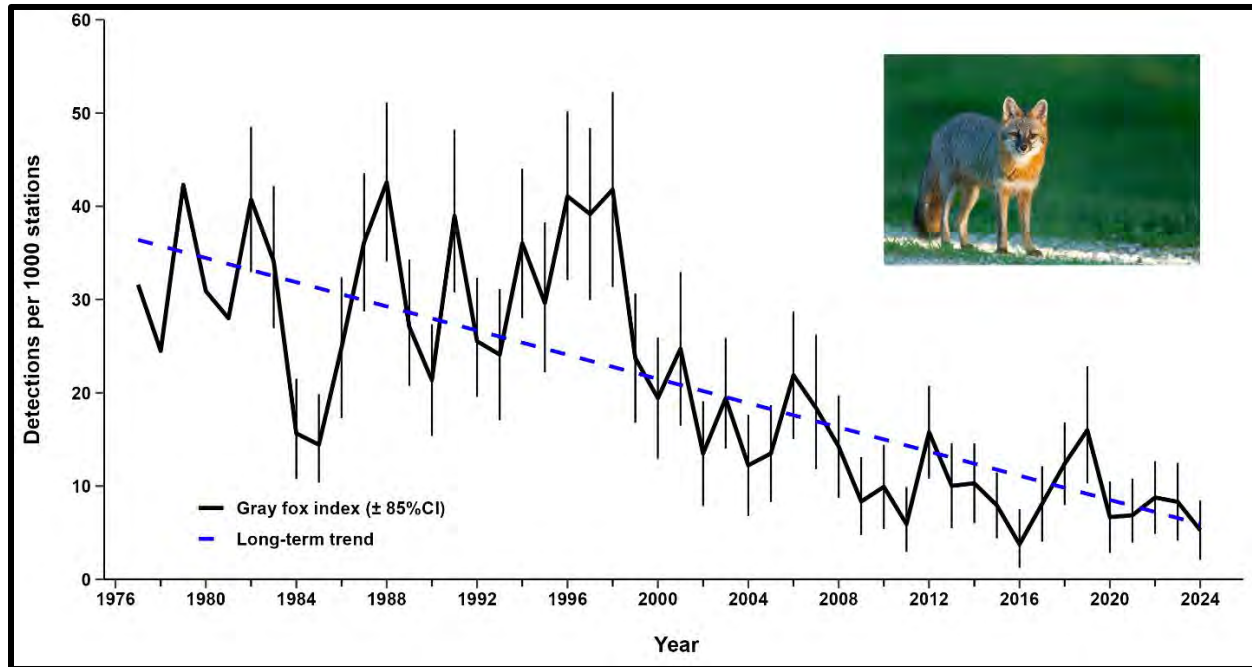


Figure 21. Missouri gray fox population index trends, 1978 to 2024.

Striped Skunk Harvest and Population Trends

Striped skunk harvest in 2023-2024 totaled 424 with most individuals harvested by trapping (Figure 22). This year's harvest was up 38.56% from last year's harvest of 306 individuals. Average striped skunk pelt prices for 2023-2024 increased 6.8% from \$11.34 in 2022-2023 to \$12.11. The last five seasons have resulted in the highest ever pelt prices for striped skunk, each subsequent year was higher than the last.

Population trends are derived from the Bowhunter Observation Survey and Furbearer Sign Station Survey. Long-term populations trends as derived by the Archer's Index (Figure 23) show a slight decline in skunk numbers compared to the Sign Station Survey (Figure 24) which suggests an increasing population. Despite the difference between these two surveys, we believe the striped skunk population is stable given the increase in harvest.



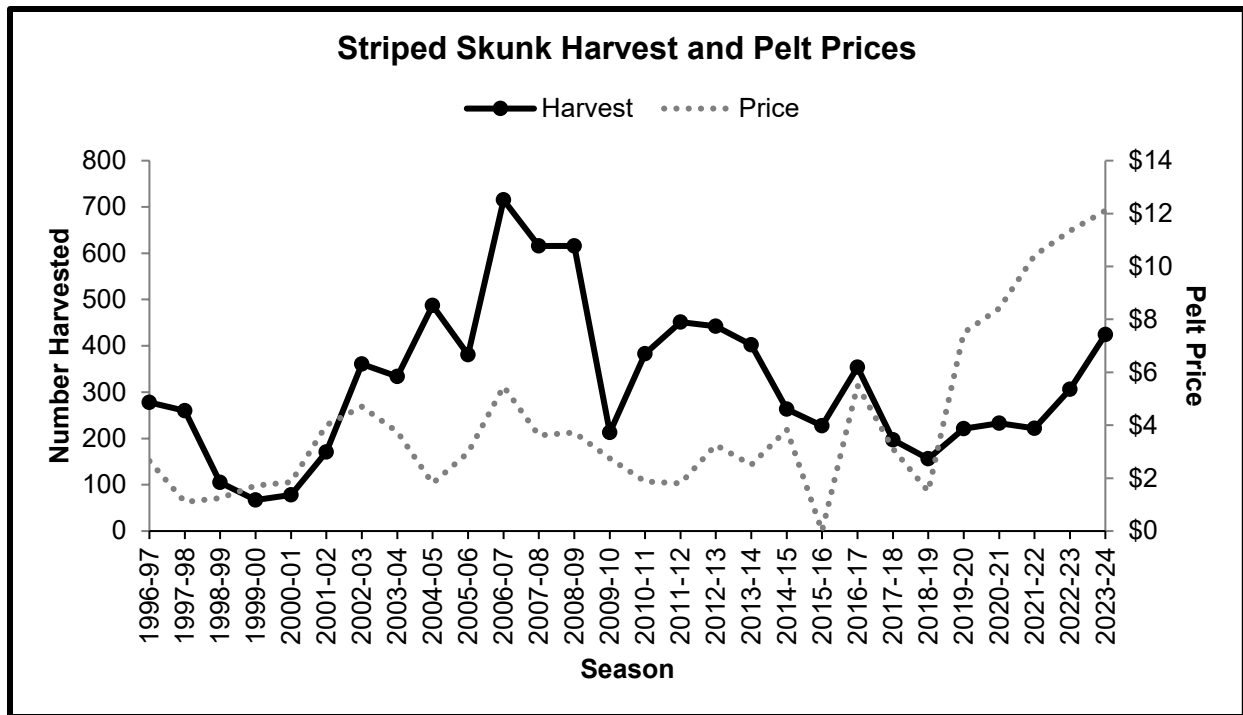


Figure 22. Comparison of Missouri striped skunk harvest and pelt prices since 1996. Harvest estimates are derived from fur buyer records. Annual pelt price estimates are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

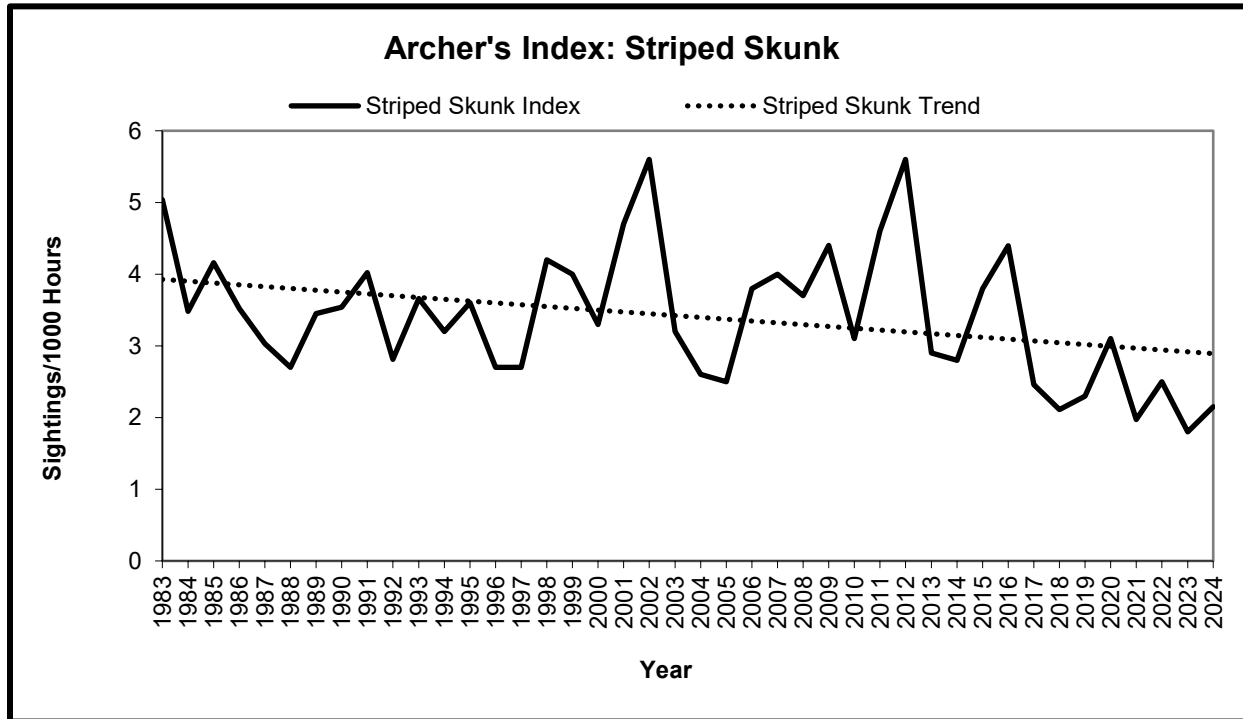


Figure 23. Missouri striped skunk population trends based on the Archer's Index, derived from the MDC Bowhunter Observation Survey, 1983-2024.

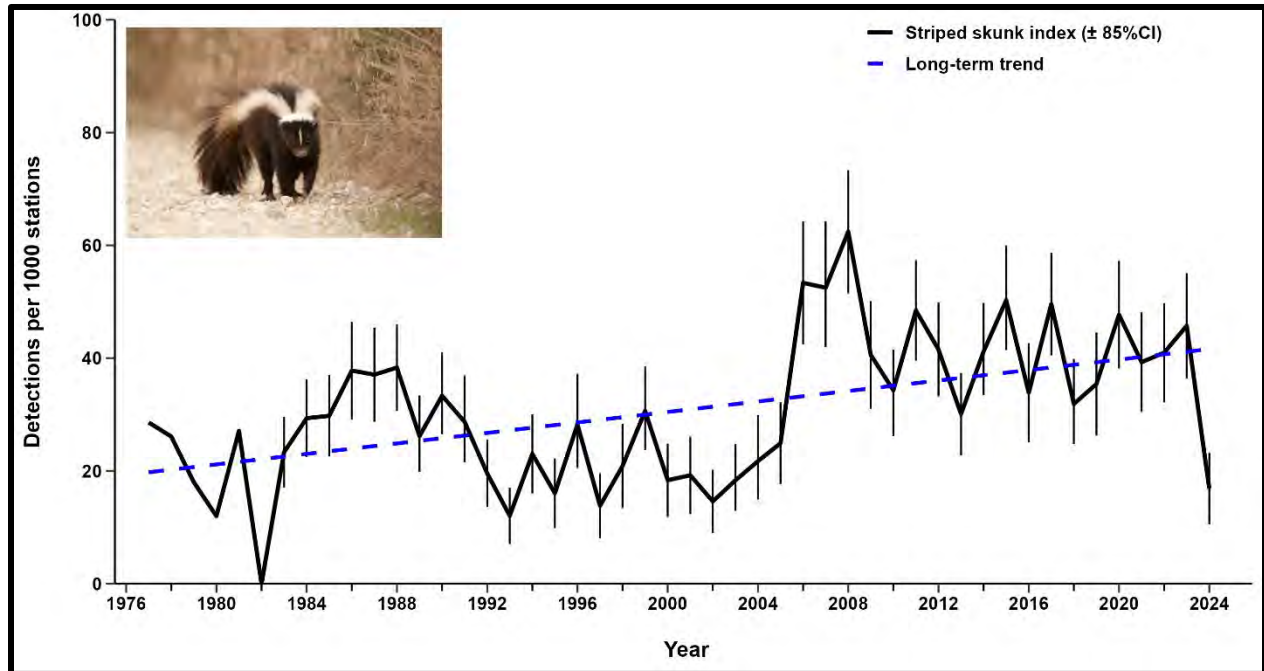


Figure 24. Missouri striped skunk population trends based on the Furbearer Sign Station Survey Index, 1976-2024.

Bobcat Harvest and Population Trends

Bobcat harvest during the 2023-2024 season was down 2.65% from 2022-2023 with **1,321 bobcats** harvested (Figure 25), however there was an increase in the number of bobcats harvested with firearms (Figure 26). Prices during the 2023-2024 season decreased by 11.2% from the previous year, to \$80.35. Trappers and hunters are required to register bobcat carcasses or green pelts at MDC offices or with Conservation Agents. The number of bobcat pelts purchased by fur dealers (2024) was significantly higher than those registered by trappers and hunters (793). Instead of selling to fur buyers, trappers usually make more money selling carcasses to taxidermists or selling mounted bobcats or may retain bobcat pelts for personal use. Trappers may have taken advantage of the recovered price for bobcat pelts to reduce large inventories from previous years.



Population trends are derived from the Bowhunter Observation Survey and Furbearer Sign Station Survey. Both Sign Station Survey and Archer's Index data suggest bobcat populations appear to be stable (Figures 27 and 28).

Geographic distribution of harvest varies by county and method. Trappers harvested 660 bobcats, while hunters harvested 381 bobcats. Bates County had the highest combined harvest at 53, as well as the highest trapper harvest at 36, and Livingston County had the highest hunting harvest at 20. (Figure 29 and 30).

Age analysis of teeth submitted to the department shows a majority of individuals harvested were in the age classes three years of age or below (Figure 31 and 32). This analysis along with other data will enable MDC to utilize Statistical Population Reconstruction (SPR) to monitor the bobcat population.

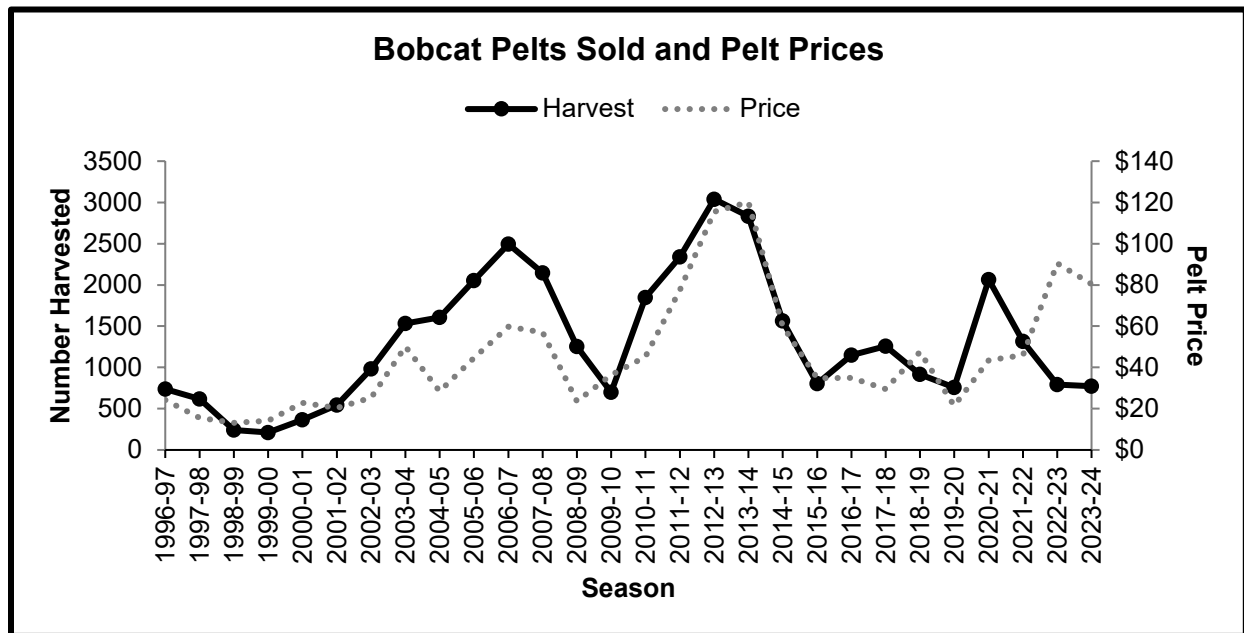


Figure 25. Missouri bobcat harvest trends since 1996 compared to average pelt prices, 1996-2024.

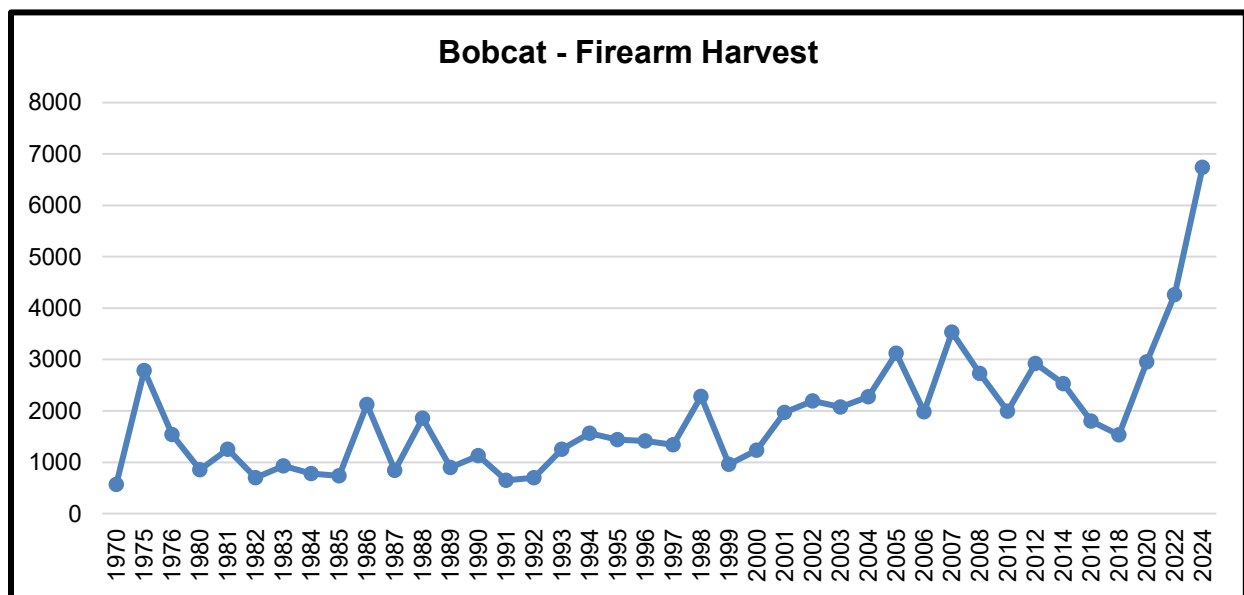


Figure 26. Missouri bobcat harvest via firearm reports through biannual small game survey, 1970-2024.

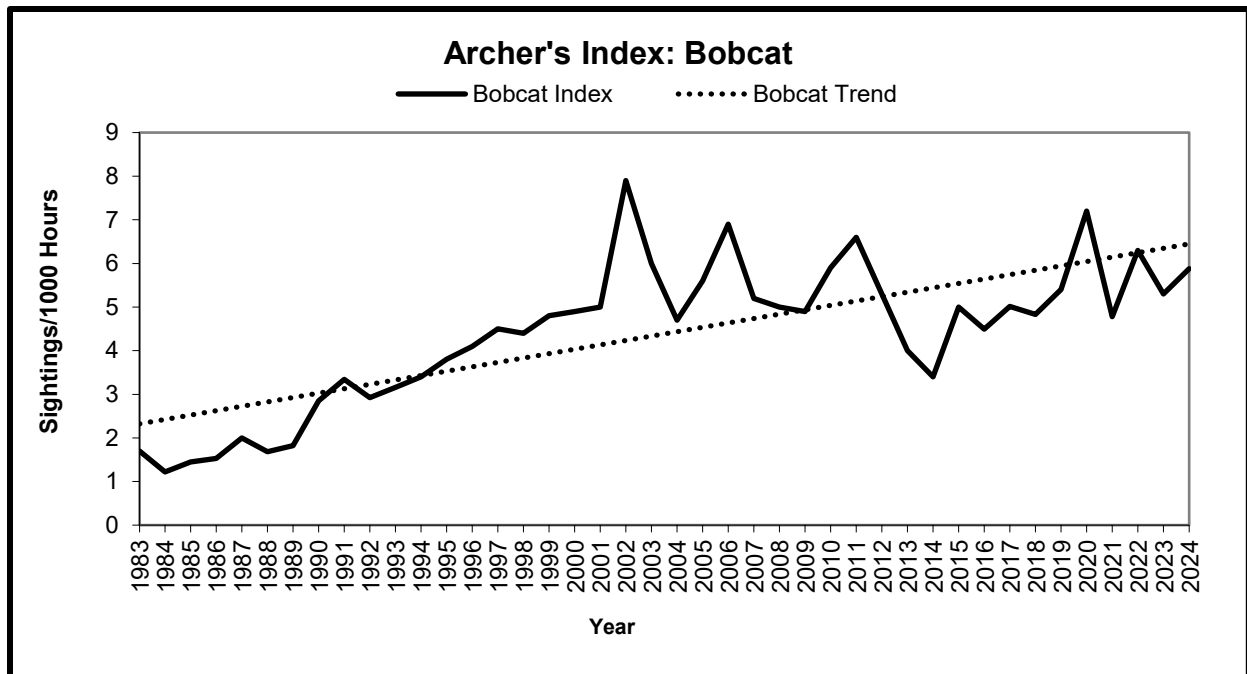


Figure 27. Missouri bobcat population trends based on the Archer's Index, derived from the MDC Bowhunter Observation Survey, 1983-2024.

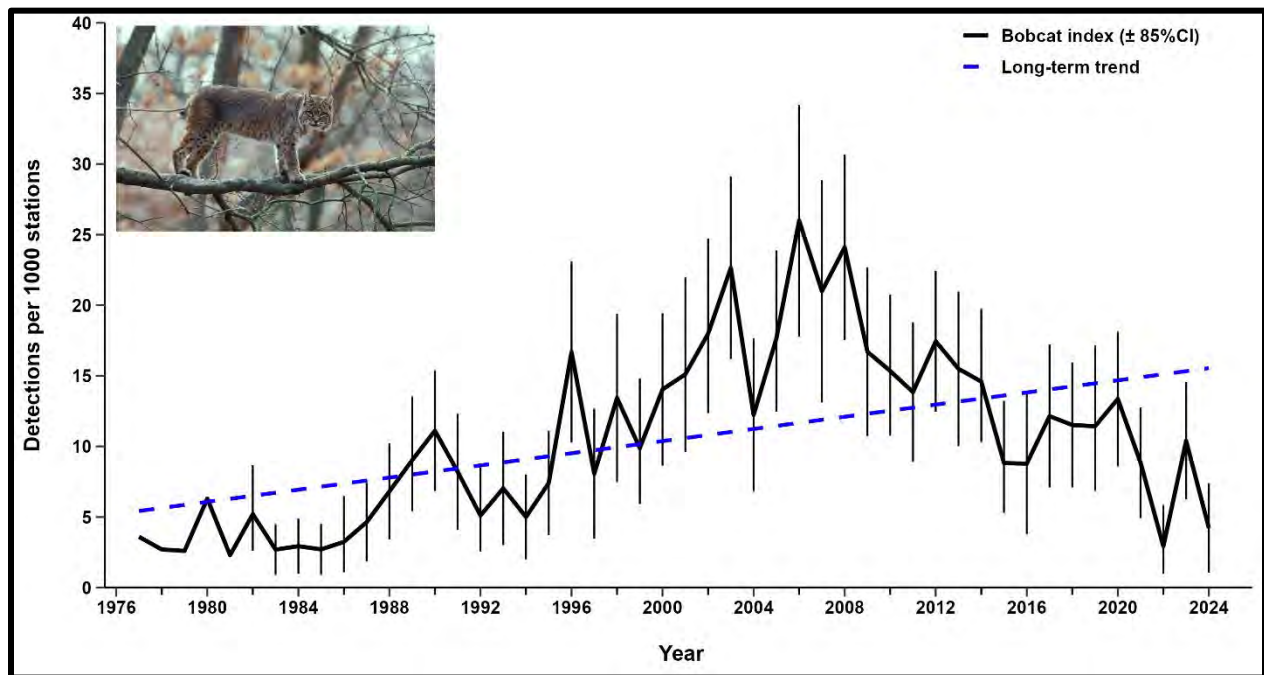
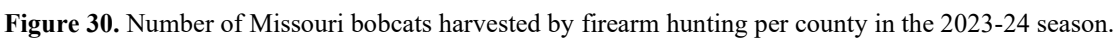


Figure 28. Missouri bobcat population trends based on the Furbearer Sign Station Survey Index, 1976-2024.





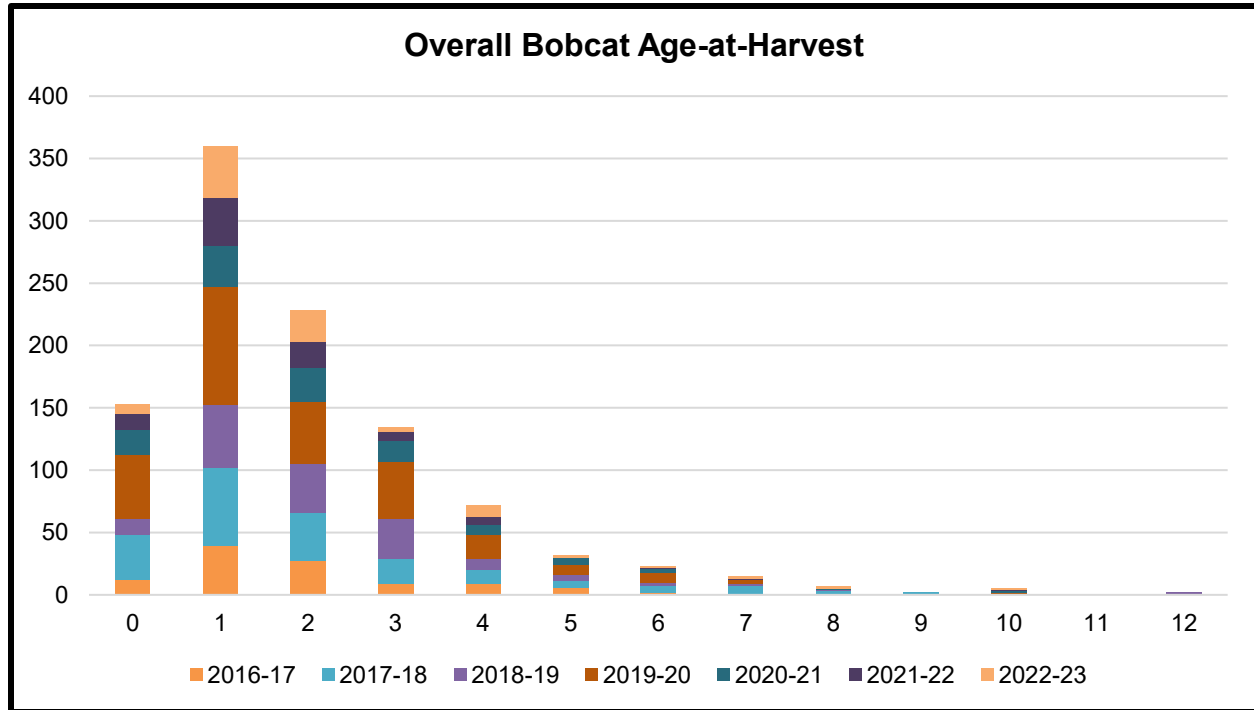


Figure 31. Ages of bobcats harvested in Missouri from 2016 to 2023 stacked by age. Age is determined by analysis of teeth submitted voluntarily by trappers and hunters.

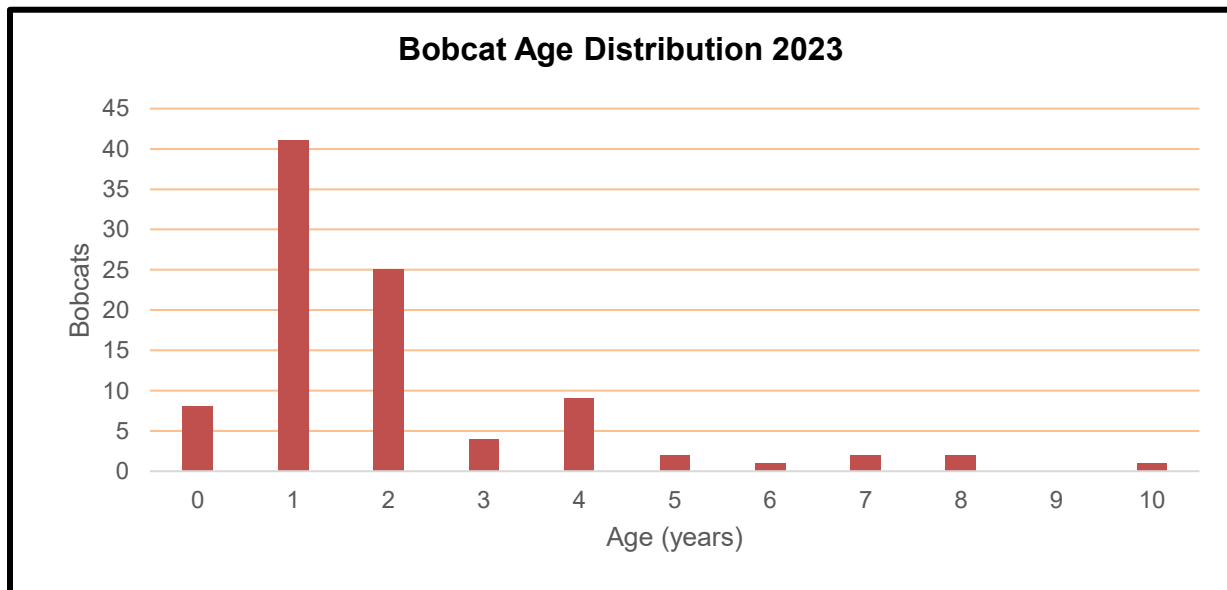


Figure 32. Ages of bobcats harvested in Missouri from 2023 stacked by age. Age is determined by analysis of teeth submitted voluntarily by trappers and hunters.

River Otter Harvest

River otter harvest for the 2023-2024 season was 1,238 river otters. River otter pelt prices increased 42.1% from last year at \$30.47 to \$43.31 and were 49.4% lower than the peak prices in 2012-2013 season. The relatively low harvest of the last five seasons can be attributed to the steady decline in pelt prices with minor fluctuations (Figure 33). Trappers are required to register river otter carcasses or green hides at MDC offices or with Conservation Agents in accordance with requirements by CITES for exportation outside of the United States.



River otter harvest was highest in Stoddard County with 59 individuals harvested (Figure 34). River otter harvest during the 2023-2024 season was highest in the Missouri River watershed with 115 harvested (Figure 35). There were an additional 646 otters harvested on private ponds or unknown locations throughout the state (Table 3).

Age analysis of teeth submitted to the department indicates that individuals in the one-year age class represent the highest proportion of the harvest compared to other age classes (Figure 36 and 37, Table 3). This analysis along with other data will enable MDC to utilize Statistical Population Reconstruction (SPR) to monitor the otter population.

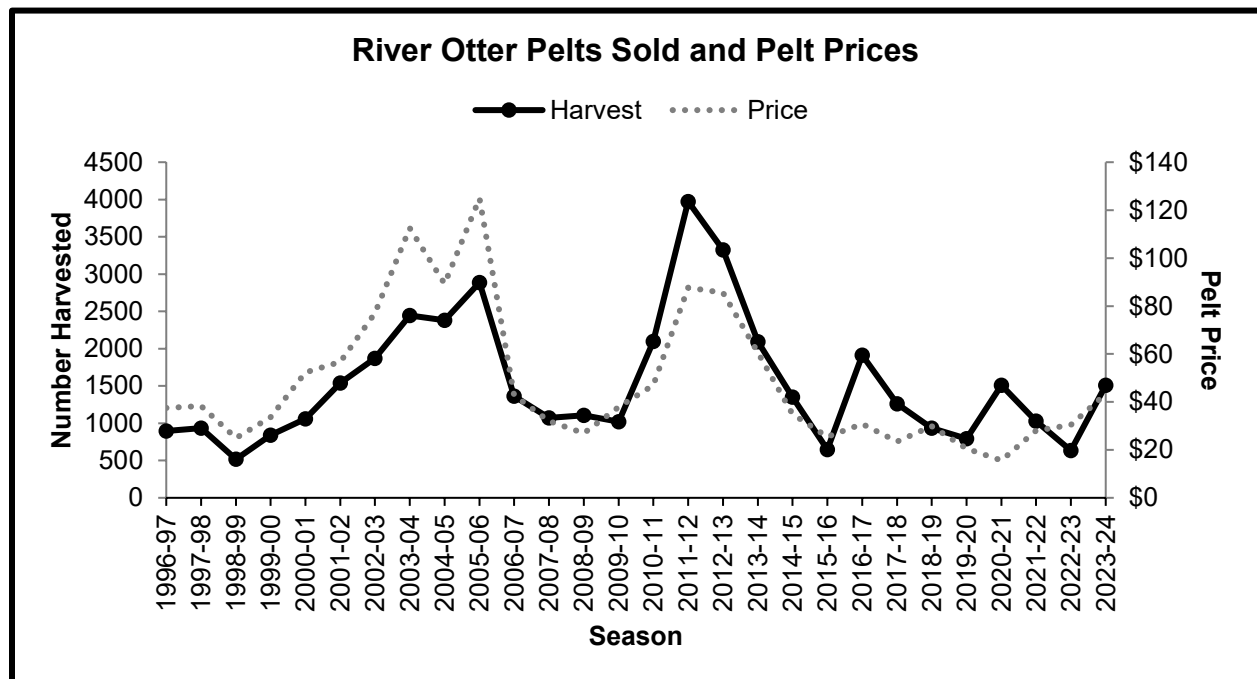
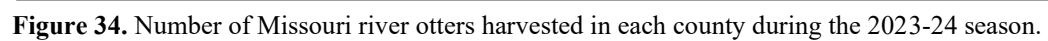


Figure 33. Missouri river otter harvest and average pelt prices from 1996 to 2024. Season did not open until 1996.



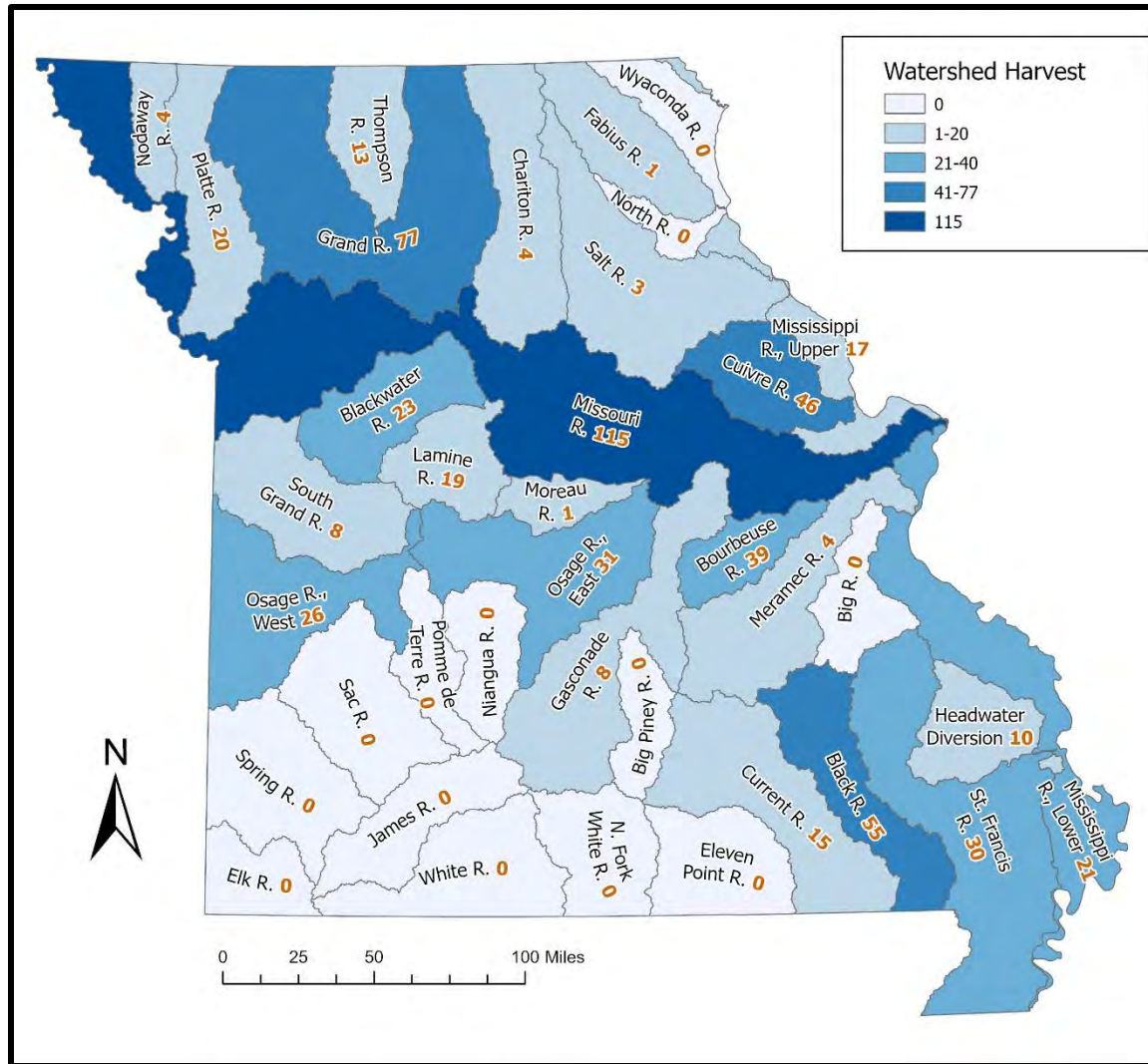


Figure 35. Missouri river otter harvest distribution among watersheds during the 2023-24 trapping season. There were an additional 571 otters taken on private ponds outside of watersheds during the 2023-24 season.

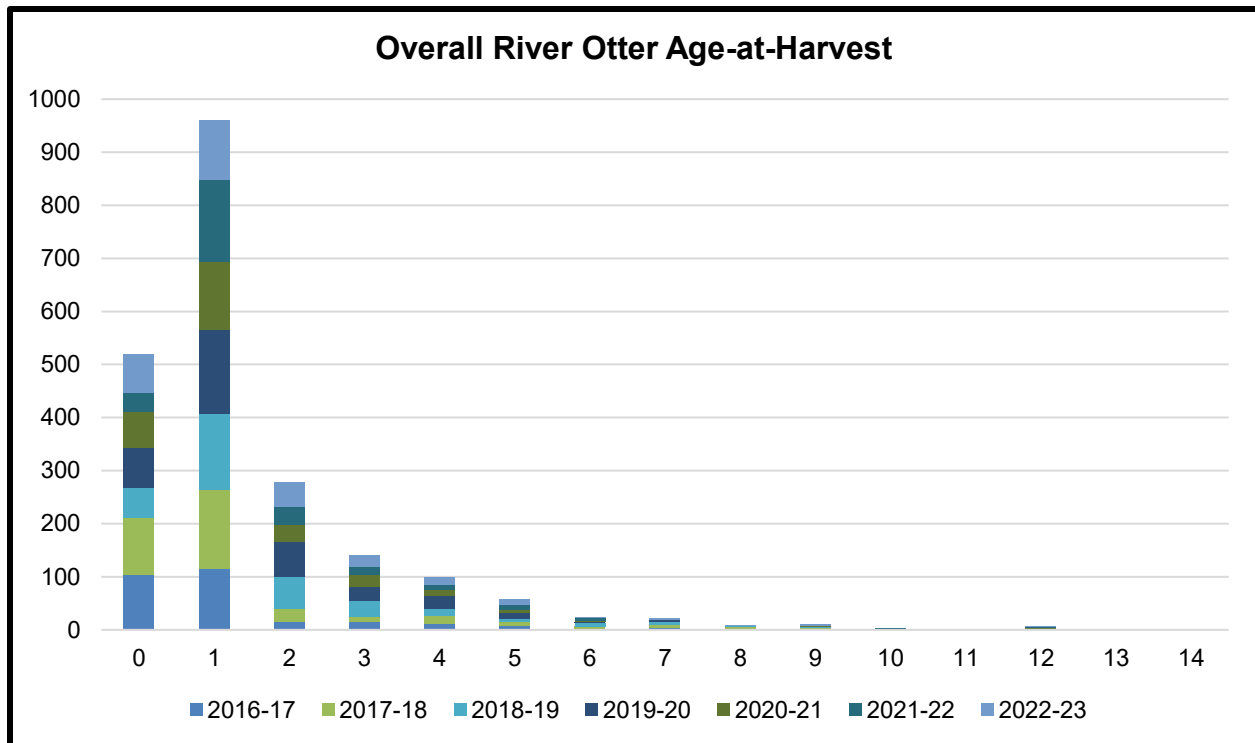


Figure 36. Ages of otter harvested in Missouri from 2016 to 2023 stacked by age. Age is determined by analysis of teeth submitted voluntarily by trappers.

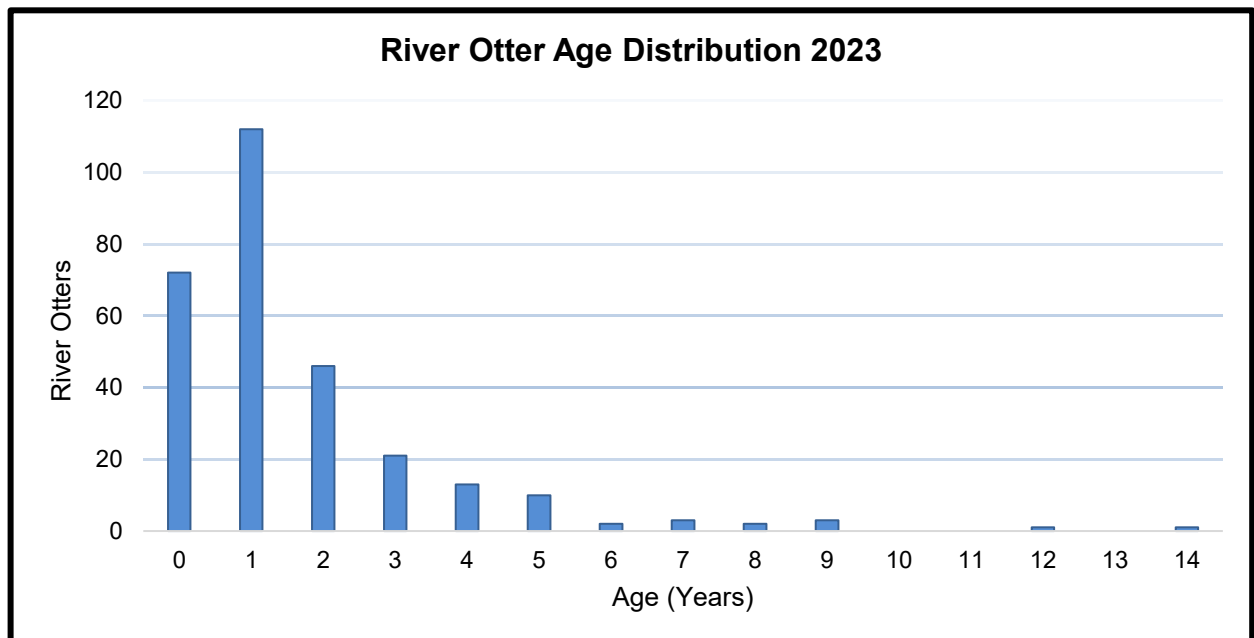


Figure 37. Ages of otter harvested in Missouri from 2023 stacked by age. Age is determined by analysis of teeth submitted voluntarily by trappers.

Table 3. Missouri river otter harvest distribution among watersheds during the 2023-2024 trapping season

Watershed	Number Harvested	Percent of Harvest	Watershed	Number Harvested	Percent of Harvest
Big Piney River	0	0.00%	Mississippi R. (upper)	17	1.37%
Big River	0	0.00%	Missouri River	115	9.29%
Black River	55	4.44%	Moreau River	1	0.08%
Blackwater River	23	1.86%	N. Fork White River	0	0.00%
Bourbeuse River	39	3.15%	Niangua River	0	0.00%
Chariton River	4	0.32%	Nodaway River	4	0.32%
Cuivre River	46	3.72%	North River	0	0.00%
Current River	15	1.21%	Osage River East	31	2.50%
Eleven Point River	0	0.00%	Osage River West	26	2.10%
Elk River	0	0.00%	Platte River	20	1.62%
Fabius River	1	0.08%	Pomme de Terre River	0	0.00%
Fox River	0	0.00%	S. Grand River	8	0.65%
Gasconade River	8	0.65%	Sac River	0	0.00%
Grand River	77	6.22%	Salt River	3	0.24%
Headwater Diversion	10	0.81%	Spring River	0	0.00%
Jacks Fork River	0	0.00%	St. Francis River	30	2.42%
James River	0	0.00%	Thompson River	13	1.05%
Lamine River	19	1.53%	White River	0	0.00%
Locust Creek	2	0.16%	Wyaconda River	0	0.00%
Meramec River	4	0.32%	Unknown	646	52.18%
Mississippi R. (lower)	21	1.70%	Total Harvest	1238	100%

Harvest and Population Trends of Mink, Muskrat, and Beaver

Mink, muskrat, and beaver harvest continue to fluctuate in somewhat predictable ranges. Since 1990, mink harvests have varied from about 150 – 1,500 (Figure 38), muskrat harvests from 5,000 – 20,000 (Figure 39), and beaver harvests from 2,000 – 10,000 (Figure 40). Historically, mink and muskrat numbers have fluctuated widely; however, habitat degradation has limited populations and subsequently reduced harvest. Beavers are a longer-lived species and less vulnerable to depredation; harvest rates are more likely related to pelt values.



Trappers harvested 298 mink (Figure 38), 4,085 muskrats (Figure 39), and 9,304 beavers (Figure 40) during the 2023-2024 season. Mink prices dropped to \$6.02; Muskrat prices increased to \$4.20, and beaver prices increased to \$26.70.

Population trends for these species are derived from the Bowhunter Observation Survey. Population trend data are low (Figure 41), in part, because these animals are associated with water bodies and may not be a common sighting for archers and are rarely present in Sign Station Surveys. Given that, trends of mink, muskrat, and beaver suggest populations are stable with slight declines for beaver.

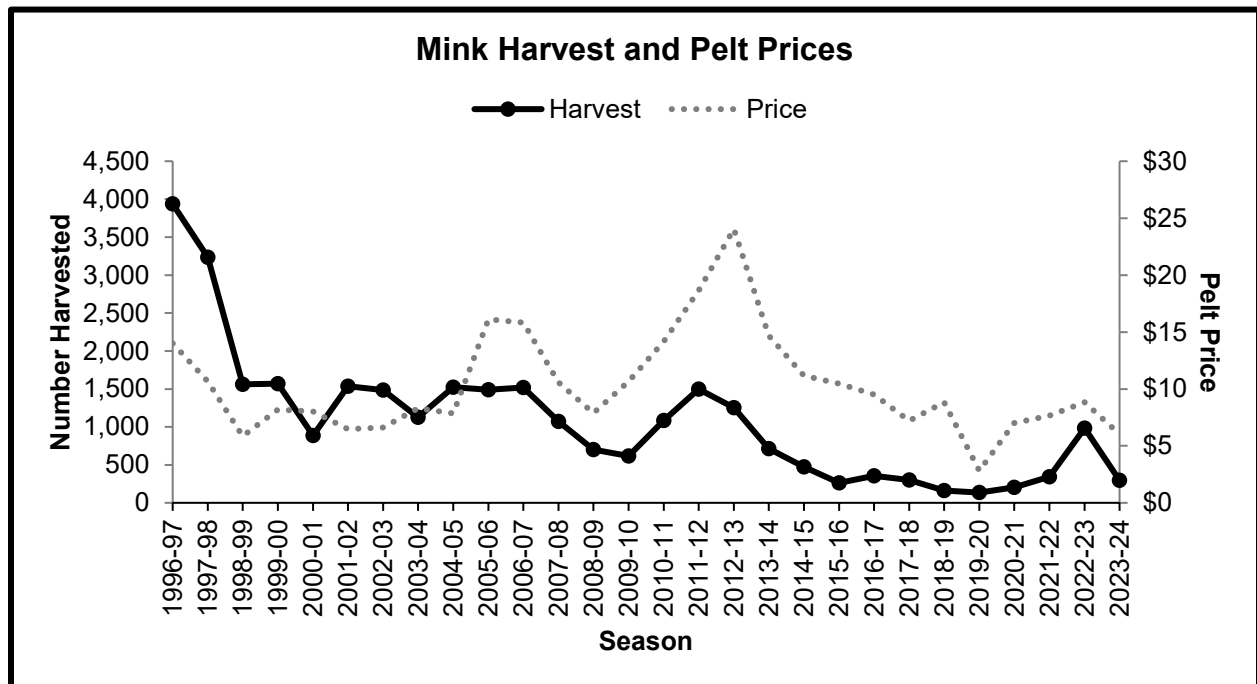


Figure 38. Missouri mink harvest trends since 1996 compared to average pelt prices. Harvest estimates are derived from fur buyer records. Annual pelt prices are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

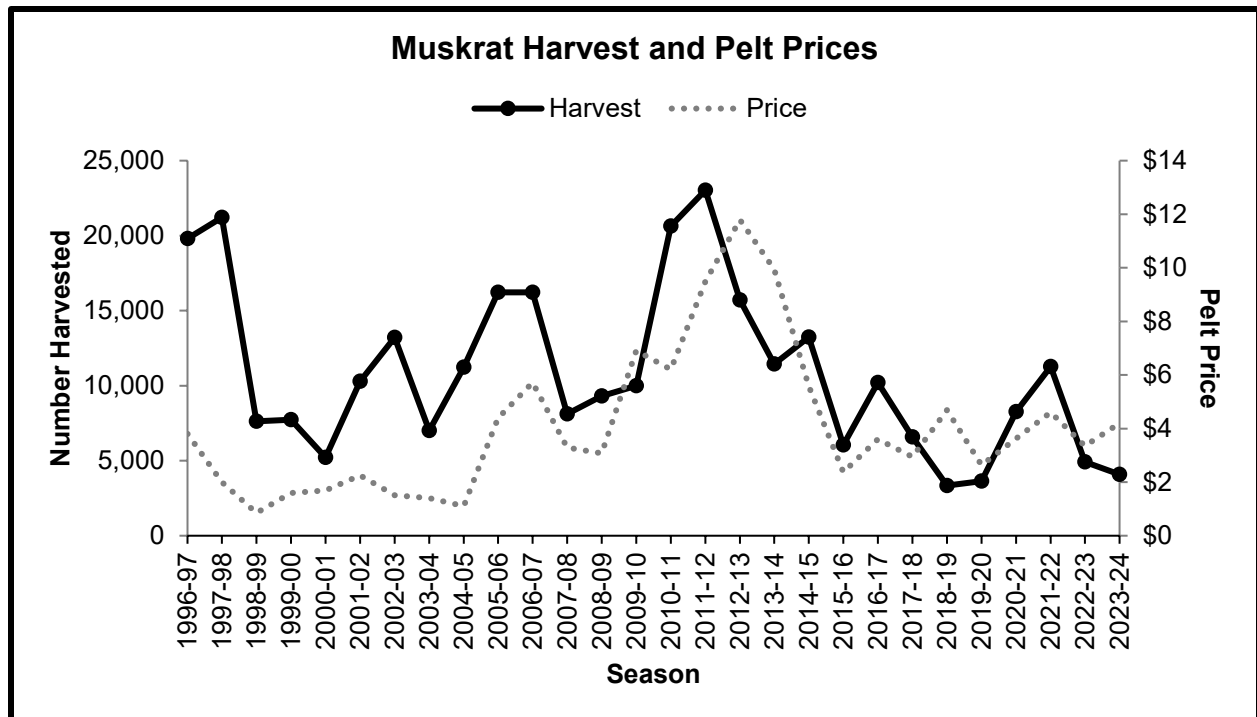


Figure 39. Comparison of Missouri muskrat harvest and pelt prices over the last 50 years. Harvest estimates are derived from fur buyer records. Annual pelt prices are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

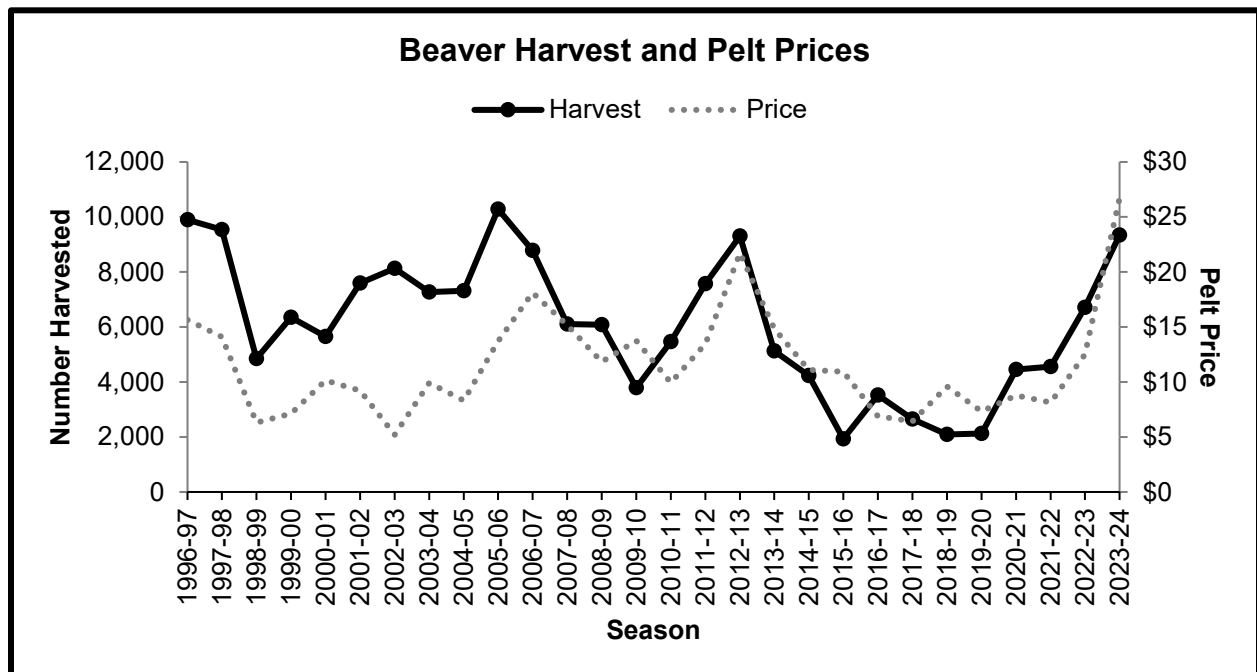


Figure 40. Comparison of Missouri beaver harvest and pelt prices over the last 50 years. Harvest estimates are derived from fur buyer records. Annual pelt prices are the average price from the Missouri Trappers Association Fur Auction, 1996-2024.

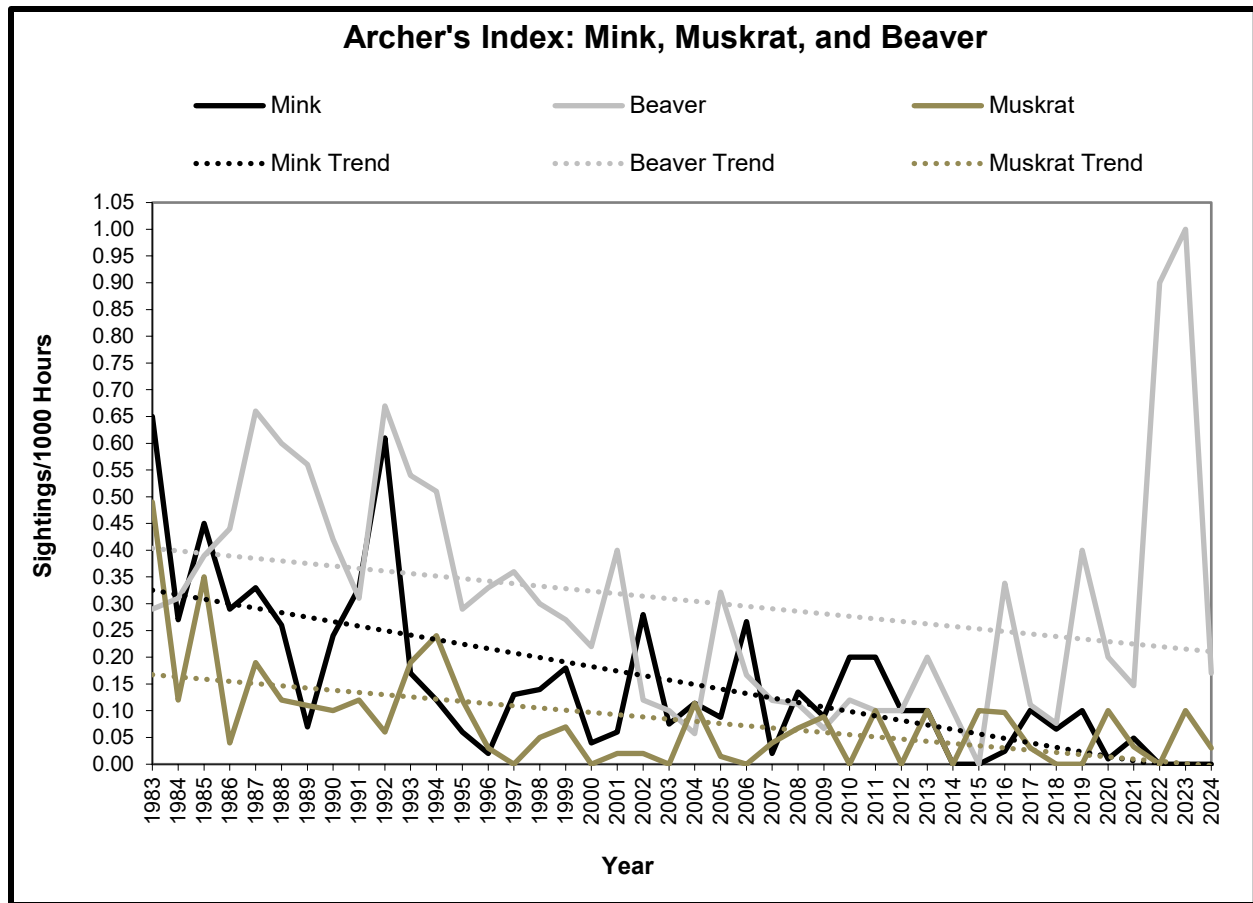


Figure 41. Mink, muskrat, and beaver population trends in Missouri based on the Archer's Index, derived from the MDC Bowhunter Observation Survey, 1983-2024.

Rare Furbearers of Missouri

Missouri residents are fortunate to reside in a state with abundant natural resources, including wildlife, and an exceptional diversity of furbearing species. As a result, opportunities for observing wildlife are plentiful while recreating or driving through the state. Of the many furbearer species that reside in Missouri, there are four species (American badgers, spotted skunks, least weasels, and long-tailed weasels) that have become less common to see over the year. In the case of the spotted skunk, least weasel, and long-tailed weasel, they have recently (within the last 3 decades) exhibited declines in population trends and harvest. Therefore, MDC decided to close trapping for those species due to this significant decline. Badgers may still be harvested, but annual pelts sold have declined over the years. Due to these four species being less common to see, MDC put out a call to all Missouri residents and people passing through the state to report observations of these rare furbearers (Figure 42) to help MDC track distribution trends in these species. More information about these rare furbearers can be found below.



Have you seen a rare Missouri furbearer?

The Missouri Department of Conservation is taking reports for the following species...

American Badger		Flattened body with short, stocky legs. Face is distinctive with black patches, whitish chin and throat, and a prominent white stripe down the head. Weigh 8 to 20 pounds.
Spotted Skunk		Distinct white spot in the center of the forehead and in front of each ear. Broken stripes down the body give a "spotted appearance." Weigh 0.5 to 2 pounds.
Least Weasel		Long, tubular shape with a tail that is 25% of the head-body length. May turn white in the winter, in summer have brown pelts with white feet and underside. Found in northern Missouri and weigh 1 to 3.5 ounces.
Long-tailed Weasel		Tail is 50% or more of the head-body length. May turn white in the winter, but have brown pelts in the summer with cream-yellow undersides. Found statewide and weigh 3 to 16 ounces.

HOW TO REPORT

MDC needs the following information with report submissions:

- ◆ Date and Time of observation
- ◆ Number of individuals observed and number of young in group
- ◆ Location (county and estimated GPS coordinates)
- ◆ Sex, if known
- ◆ Status (alive, trapped, road-killed, etc.)
- ◆ Name, address, phone number, and/or email

Report Sightings to:

Nathaniel Bowersock
Furbearer Biologist
Missouri Department of Conservation
Central Regional Office
3500 East Gans Road
Columbia, MO 65201
(573) 815-7900 ext. 2903
Nathaniel.Bowersock@mdc.mo.gov

Additional Information:

Badger can be legally harvested in Missouri during the established season. Please report any badger sightings, captures or road-kill animals.

There is **NO** trapping or hunting season for weasels or spotted skunks. Please report any sightings, photos, or road-kill animals to the Department.

If you accidentally trap a weasel or spotted skunk and the animal is alive, it must be immediately released. Please report the incidental capture. If you accidentally trap a weasel or spotted skunk and the animal is dead, the entire carcass must be turned over to your local conservation agent.

Figure 42. Rare furbearer sightings request flier distributed by Missouri Department of Conservation.

American Badger

The American badger is a native, but uncommon, furbearing species in Missouri and is state ranked as a **Vulnerable Species of Conservation Concern** by MDC. American badgers are a fossorial (burrowing animal) species and require habitat where suitable soil is available for digging burrows for both them and for hunting prey. American badgers can be found throughout the state in any of the **8 zoological regions** (Figure 43), but the sandier soils they prefer occurs primarily in four regions: Western Prairie, Northwest Prairie, Northern Riverbreaks, and Northeast Riverbreaks. Consequently, the bulk of the recorded observations in the Missouri Natural Heritage database occur in these four regions.



Considered a furbearing species in Missouri, American badgers are harvested annually during the trapping season. However, harvest has historically been low compared to other furbearers because American badger pelts are not as desirable compared to other, more valuable pelts (Figure 44). Furthermore, most American badger harvest occurs because of human-wildlife conflict. The decline in harvest in recent decades is likely due to a variety of factors. First, grasslands and prairies, where the soil substrate is suitable for burrowing, have been

converted to intensive agriculture, which has greatly reduced the habitat and prey species badgers prefer. Second, interest in trapping also has declined leading to lower participation rates. Despite changes in trapping effort, results from the Bow Hunter Observation survey suggest a positive long term population trend (Figure 45).

To offset the reduced number of observations and low harvest, MDC made a concerted effort to collect and record American badger observations and specimens from citizens (e.g., trappers) and MDC personnel from 2009 through 2011 to better understand the demographics and distribution of American badgers in Missouri. As a result, there are more than 400 records within the Missouri Natural Heritage database, allowing the Department to determine where the species is most prevalent in the state. In 2017, MDC once again made a call for American badger observations with the distribution of a flyer to the Missouri Trappers Association, MDC Regional Offices and Nature Centers, and Missouri DNR State Parks (Figure 42). This renewed effort produced 101 new sightings of American badgers across the state, but primarily in the four suitable zoological regions mentioned previously (Figure 43). MDC will continue to collect information about American badgers from citizens and MDC personnel.

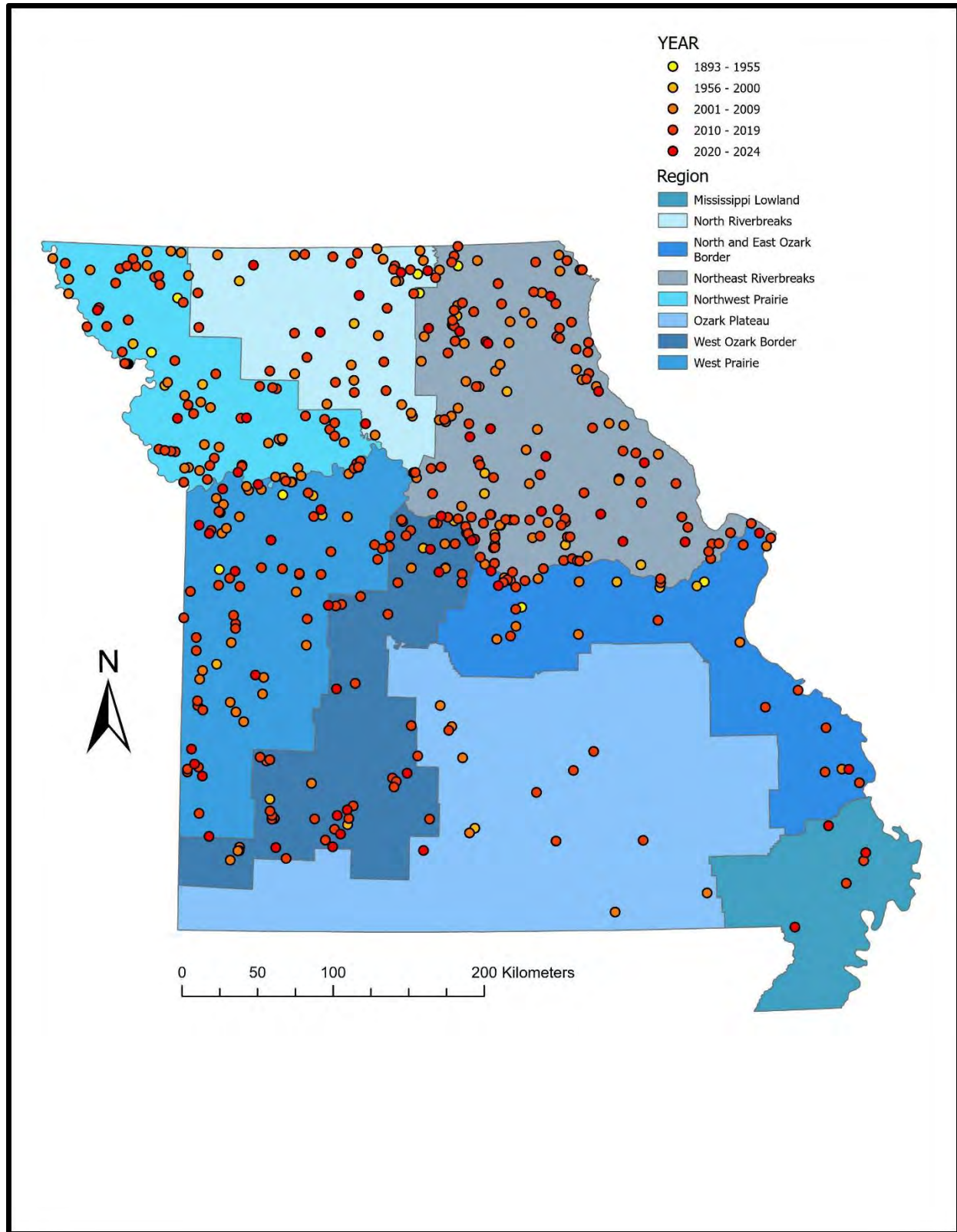


Figure 43. American badger sightings from the Missouri Natural Heritage database ranging from the 1940s to 2024 and occur in all 8 zoological regions.

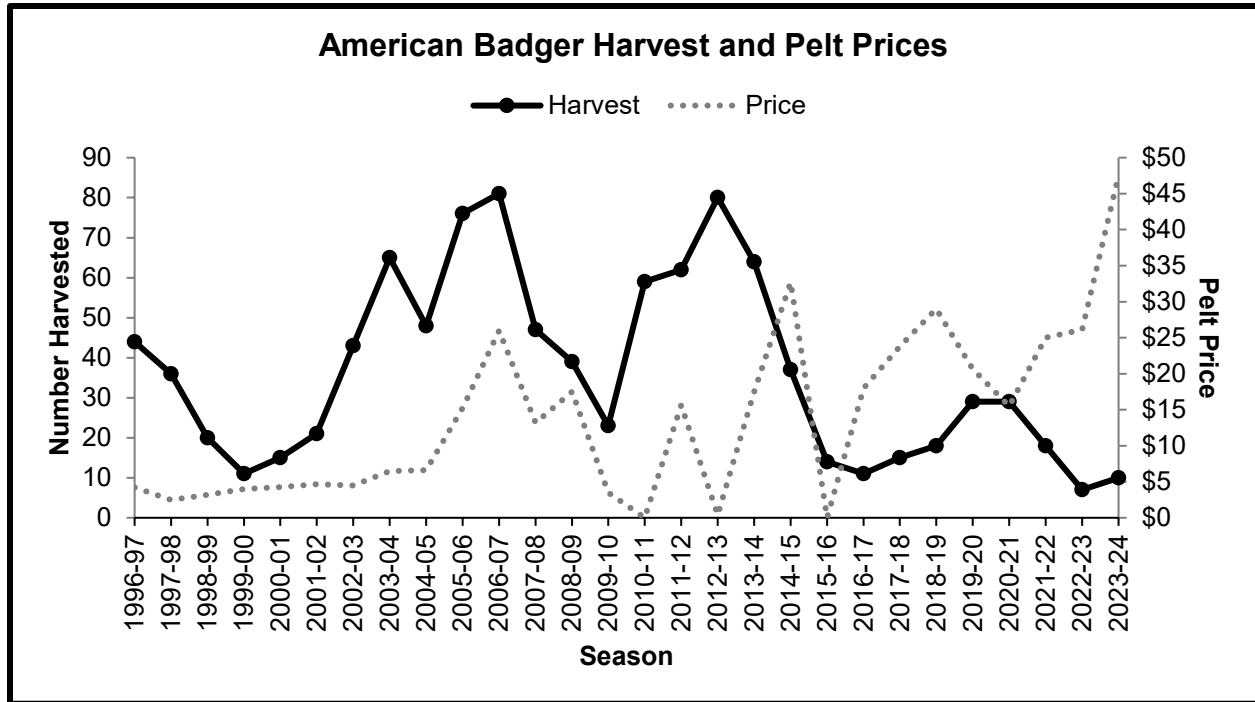


Figure 44. American badger harvest and pelt prices in Missouri since 1996. No sales occurred in 2010-11, 2012-13, and 2015-16.

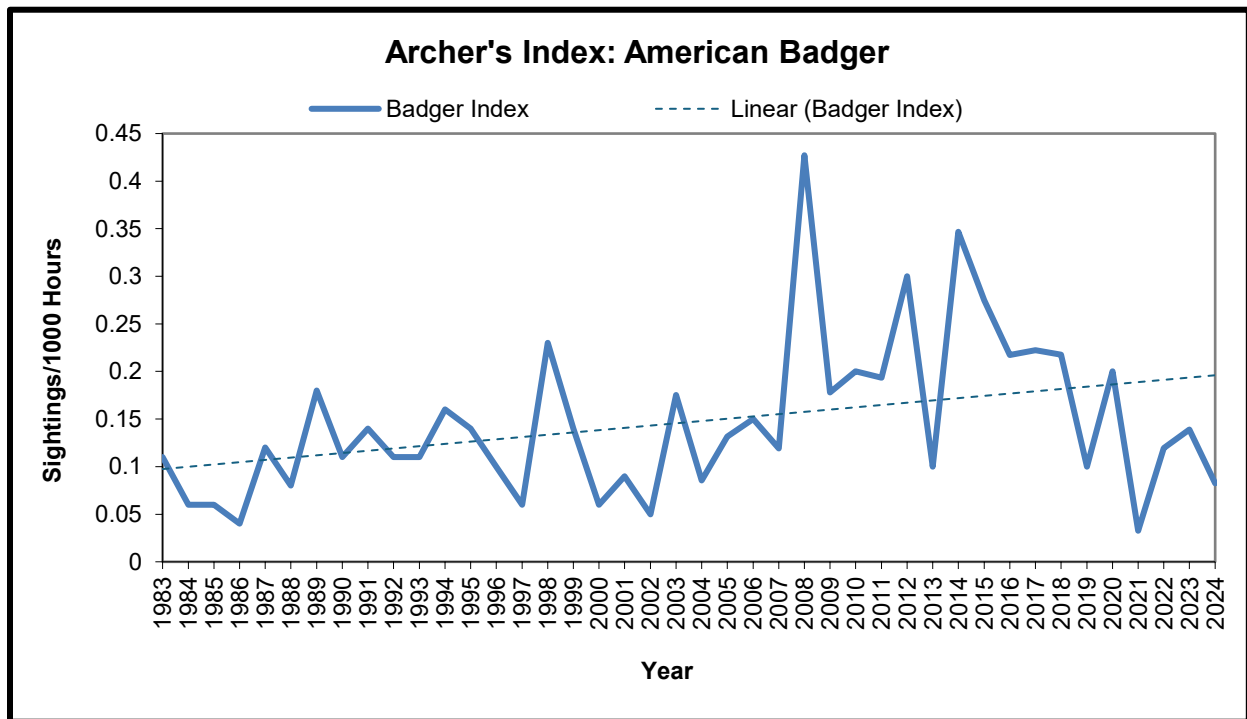


Figure 45. American badger population trends in Missouri based on the Archer's Index, derived from the MDC Bowhunter Observation Survey, 1983-2024.

Spotted Skunk

The subspecies of **eastern spotted skunk** native to Missouri is the plains spotted skunk. This species was once abundant, albeit not as abundant as their striped cousins, and harvest of 30,000 or more individuals each year was common in Missouri. Declines in annual harvest began in the late 1940s, as total harvest dropped precipitously from a high point of more than 55,000 to less than 10,000 individuals over a period of 7 years. After another 5 years, annual harvest dipped to less than 1,000 individuals until harvest dropped to less than 10 each year and MDC closed the season for spotted skunks in 1991-92 (Figure 46). Currently, the plains spotted skunk is listed as **state Endangered** and state ranked as a **critically imperiled Species of Conservation Concern** in Missouri. Records of spotted skunk sightings are maintained in the Missouri Natural Heritage database, which tracks locations of all Missouri species of conservation concern (Figure 47).

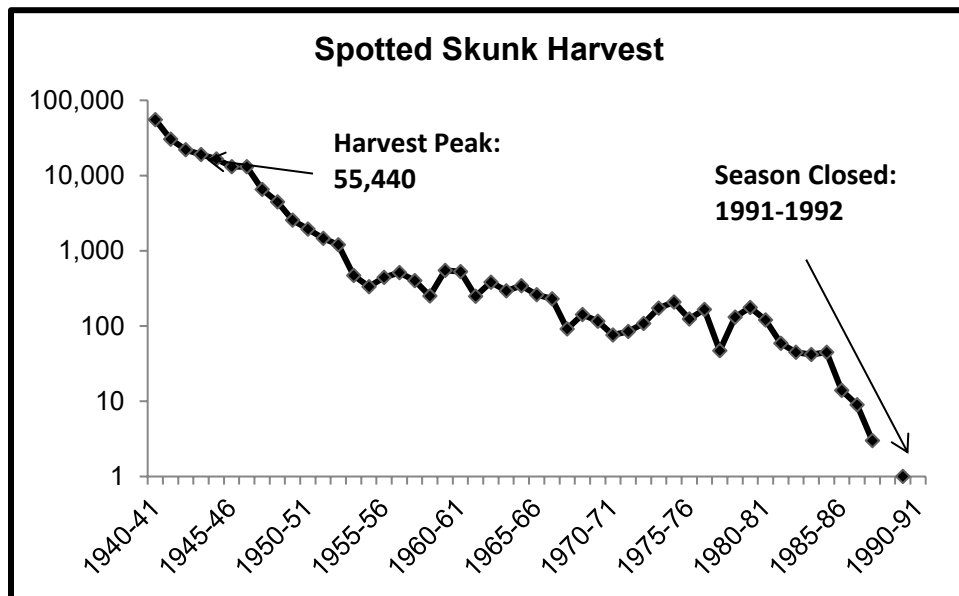


Figure 46. Historic spotted skunk harvest in Missouri from the peak harvest in 1940-1941 to the close of the spotted skunk trapping season in 1991-92.

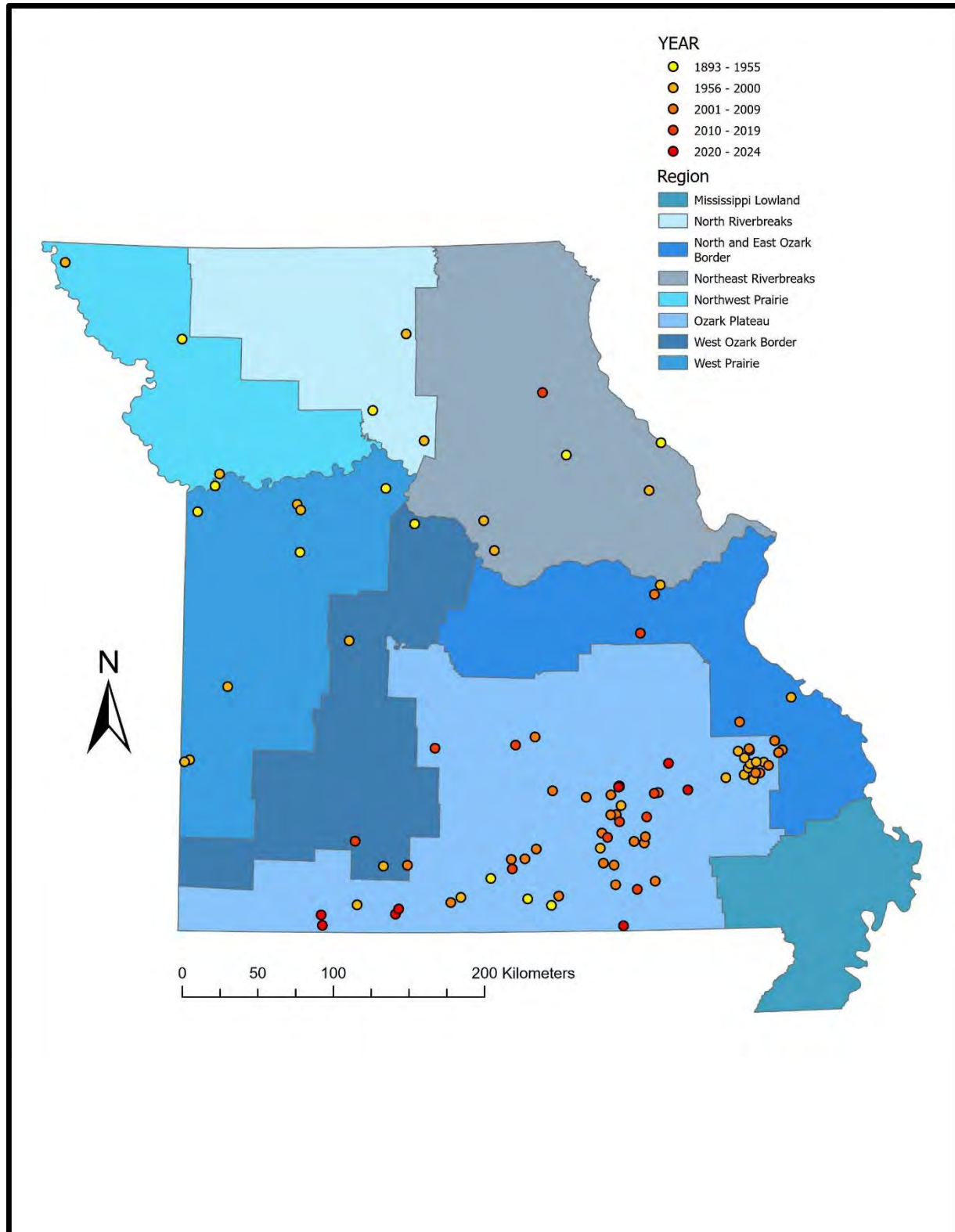


Figure 47. Plains spotted skunk sightings from the Missouri Natural Heritage database ranging from the 1940s to 2024 and occur in all 8 zoological regions.

Least and Long-tailed Weasel

Northern Missouri is the southern extent of the **least weasel's** range; therefore, the species was never widespread in the state. Although traditionally considered a furbearer, Missouri's *Wildlife Code* does not define least weasels as a furbearing or game species. Conversely, **long-tailed weasels** can be found from central Canada into portions of South America and thus, can be found throughout the state of Missouri. Long-tailed weasels are the primary target of weasel trapping efforts in Missouri, but harvest records indicate an overall 'weasel' category, suggesting take of both species occurred. Weasels were never a large proportion of the fur harvest in Missouri, but harvest peaked in the mid-1930s before steadily declining until the season was closed in 2000-01 (Figure 48).

Currently, both weasel species are classified as **Species of Conservation Concern** and state ranked as **Vulnerable**. Like spotted skunks, sightings of both weasel species are maintained in the Missouri Natural Heritage database providing an indication of their distributions in Missouri (Figures 49 and 50).

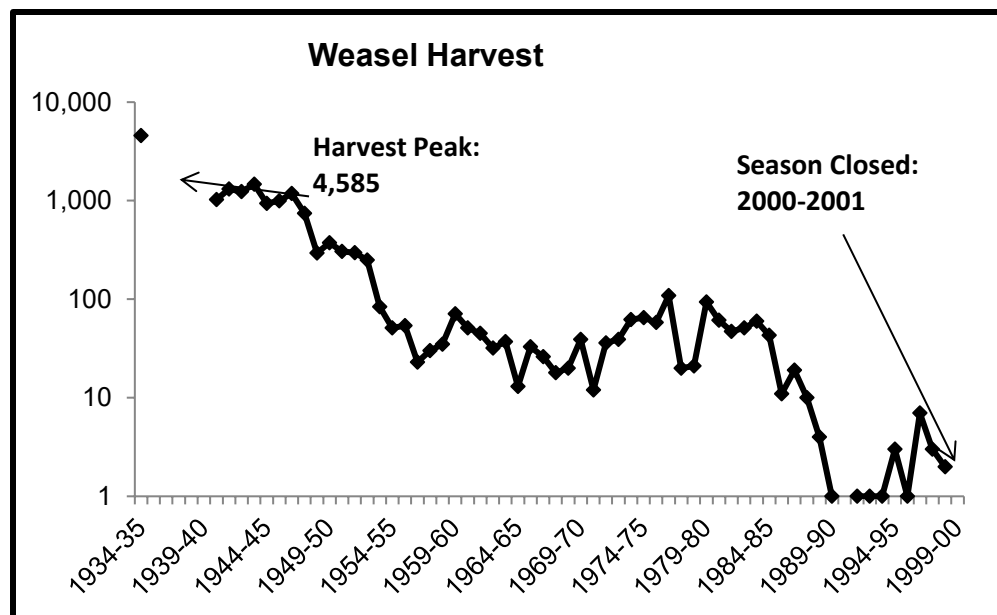


Figure 48. Historic weasel harvest in Missouri from the harvest peak in 1934-35 to the close of the weasel trapping season in 2000-01 with a gap in harvest data from 1935-36 through 1939-40.

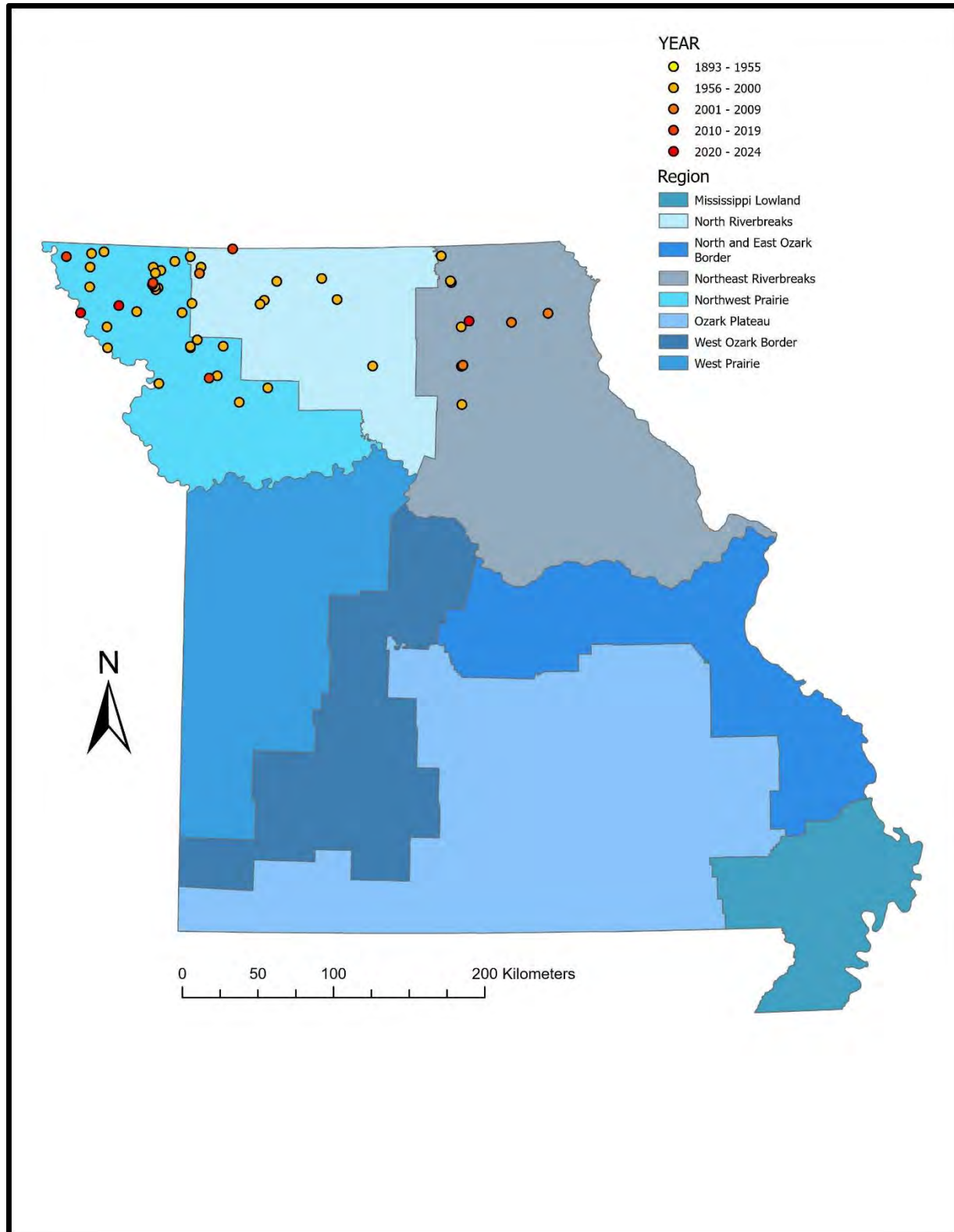


Figure 49. Least weasel sightings from the Missouri Natural Heritage database ranging from the 1940s to 2024, mostly found in the north half of Missouri.

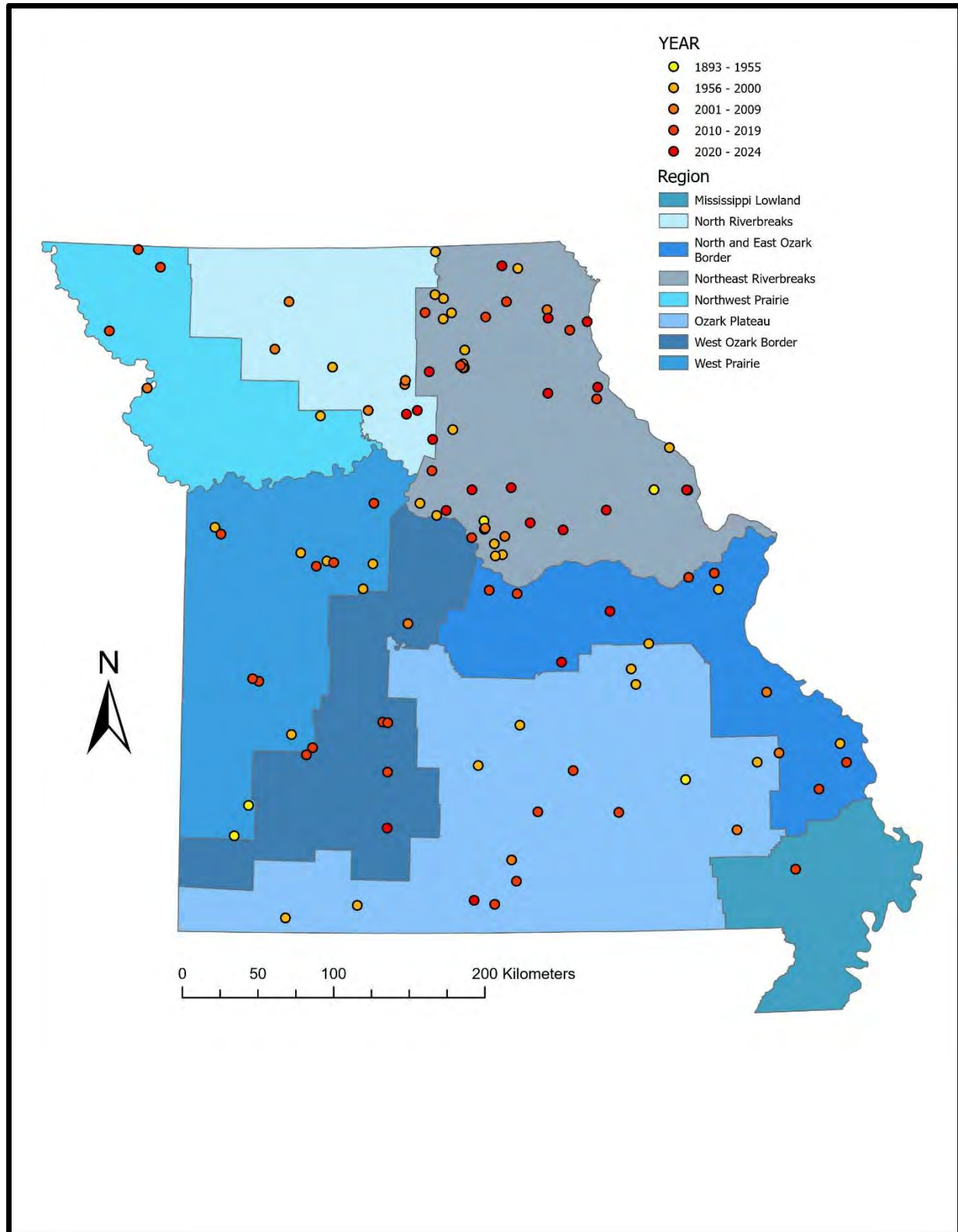


Figure 50. Long-tailed weasel sightings from the Missouri Natural Heritage database ranging from the 1940s to 2024 and occur in all 8 zoological regions.

State Furbearer Records

Official furbearer weight records began in 2011. Candidate furbearers must be weighed at MDC's Central Regional Office in Columbia or verified by MDC staff on a certified scale. **One new** record sized furbearer was harvested during the 2023-24 season; a 19 lbs. 11 oz nutria harvested in New Madrid County. Please note that some larger weights may have occurred prior to official record keeping in 2011 but cannot be considered record weights at present.



Table 4. Current record-holders and weights of record furbearing species. * Indicates new record.

Current Record Furbearers						
Species	Sex	Date Taken	County Taken	Weight (lbs.)	Ounces (oz.)	Hunter/Trapper
Badger	M	12/17/2014	Perry	28	14.4	Corey Robinson
Badger	M	11/21/2017	Randolph	28	14.4	Glen and Kyle Fessler
Beaver	F	3/8/2020	Chariton	81	0	Clay Creech
Bobcat	M	12/22/2019	Worth	50	0	Harold Owens
Coyote	M	1/13/2020	Maries	51.5	0	Bradley Deeken
Gray Fox	M	1/2/2016	Marion	12	11	Lance Hudson & Bobby Gruenloh
Mink	M	1/19/2013	Ralls	5	3.2	Jeff Thompson
Muskrat	M	1/29/2020	Cass	4	5.3	Dennis Hull
*Nutria	M	2/10/2024	New Madrid	19	11	Justin McKinney
Opossum	M	12/18/2016	Lincoln	16	2.6	Jacob Doll
Raccoon	M	12/11/2022	Worth	35	0	Couper and Hunter Simmons
Red Fox	F	12/29/2018	Cape Girardeau	13	5.7	Jake Partridge
River Otter	M	2/4/2019	Ozark	32	11.2	Sam Day
Striped Skunk	M	12/4/2018	Moniteau	9	14	Ethan Starr

Appendix A

Missouri hunter hours and furbearer population indices based on archer's diaries, 1983 to 2024.

YEAR	Hunter Hours	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
1983	55,374	20.0	6.5	5.1	1.7	23.8	12.6	5.0	0.7	0.3	0.5	0.1	0.1	0.0	0.0
1984	32,746	18.8	6.8	3.1	1.2	16.9	6.4	3.5	0.3	0.3	0.1	0.0	0.1	0.0	0.0
1985	30,990	20.1	5.3	2.8	1.5	15.4	8.6	4.2	0.5	0.4	0.4	0.1	0.1	0.1	0.0
1986	51,727	23.5	5.7	2.8	1.5	15.3	6.9	3.5	0.3	0.4	0.0	0.0	0.0	0.0	0.0
1987	57,457	23.5	4.5	2.5	2.0	23.3	10.1	3.0	0.3	0.7	0.2	0.1	0.1	0.1	0.0
1988	84,497	22.4	4.7	2.4	1.7	16.7	4.8	2.7	0.3	0.6	0.1	0.0	0.1	0.1	0.0
1989	72,992	21.1	5.1	2.4	1.8	19.6	5.6	3.5	0.1	0.6	0.1	0.0	0.2	0.1	0.0
1990	72,227	23.6	4.9	2.3	2.9	24.0	7.2	3.5	0.2	0.4	0.1	0.0	0.1	0.1	0.0
1991	64,434	26.1	4.7	3.0	3.3	30.5	11.7	4.0	0.3	0.3	0.1	0.0	0.1	0.0	0.1
1992	64,452	22.5	4.7	2.3	2.9	24.3	8.9	2.8	0.6	0.7	0.1	0.0	0.1	0.3	0.0
1993	53,857	19.7	4.2	2.1	3.2	28.1	7.7	3.7	0.2	0.5	0.2	0.0	0.1	0.3	0.0
1994	49,102	21.0	5.1	2.0	3.4	32.0	7.6	3.2	0.1	0.5	0.2	0.0	0.2	0.2	0.0
1995	66,106	22.3	4.6	2.1	3.8	36.5	9.6	3.6	0.1	0.3	0.1	0.0	0.1	0.3	0.1
1996	60,077	19.6	4.5	1.8	4.1	29.7	6.6	2.7	0.0	0.3	0.0	0.0	0.1	0.5	0.0
1997	47,816	18.0	4.0	2.0	4.5	31.2	7.4	2.7	0.1	0.4	0.0	0.0	0.1	0.6	0.0
1998	43,152	20.8	4.1	2.4	4.4	33.0	10.6	4.2	0.1	0.3	0.1	0.0	0.2	0.3	0.1
1999	44,012	29.2	3.7	2.2	4.8	45.9	12.5	4.0	0.2	0.3	0.1	-	0.1	0.5	-
2000	50,795	20.0	3.7	2.0	4.9	32.1	8.1	3.3	0.0	0.2	0.0	0.0	0.1	0.3	0.0
2001	47,023	19.5	3.6	2.1	5.2	38.7	8.2	4.7	0.1	0.4	0.0	0.0	0.1	0.3	0.0
2002	42,826	24.6	3.8	1.5	7.9	42.6	14.4	5.6	0.3	0.1	0.0	0.0	0.1	0.8	0.1
2003	39,964	20.5	2.7	1.5	6.0	37.9	7.2	3.2	0.1	0.1	0.0	0.0	0.2	0.6	0.0
2004	35,071	17.6	2.8	1.1	4.7	37.3	7.9	2.6	0.1	0.1	0.1	0.0	0.1	1.2	0.0
2005	68,440	21.2	2.8	1.3	5.6	37.3	8.5	2.5	0.1	0.3	0.0	0.0	0.1	0.5	0.0
2006	60,040	22.2	3.2	1.3	6.9	54.4	14.4	3.8	0.3	0.2	0.0	0.0	0.1	0.5	0.0
2007	50,390	19.8	3.0	1.5	5.2	40.0	9.4	4.0	0.0	0.1	0.0	0.0	0.1	0.4	0.0
2008	44,471	16.3	2.6	1.2	5.0	41.5	7.8	3.7	0.1	0.1	0.1	0.0	0.4	0.3	0.0
2009	44,919	20.6	2.6	1.2	4.9	42.0	12.4	4.4	0.1	0.1	0.1	0.0	0.2	1.2	0.1
2010	42,907	27.1	2.1	1.0	5.9	60.6	12.9	3.1	0.2	0.1	0.0	0.0	0.2	0.7	0.0

YEAR	Hunter Hours	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
2011	41,370	26.1	2.7	1.1	6.6	70.1	16.6	4.6	0.2	0.1	0.1	0.0	0.2	0.9	0.0
2012	63,621	24.4	3.6	1.4	5.3	45.8	7.1	5.6	0.1	0.1	0.0	0.0	0.3	1.1	0.0
2013	68,674	16.2	2.1	1.4	4.0	33.3	5.7	2.9	0.1	0.2	0.1	0.0	0.1	0.6	0.1
2014	60,560	20.3	2.5	1.3	3.4	37.5	5.8	2.8	0.0	0.1	0.0	0.0	0.3	0.3	0.1
2015	58,203	26.2	2.5	2.0	5.0	55.2	13.4	3.8	0.0	0.0	0.1	0.0	0.3	0.6	0.1
2016	41,409	23.3	2.9	1.5	4.5	36.6	10.2	4.4	0.0	0.3	0.1	-	0.2	0.2	0.2
2017	98,898	24.3	3.4	2.9	5.0	48.5	11.8	2.5	0.1	0.1	0.0	-	0.2	0.6	0.1
2018	91,936	25.4	3.6	1.8	4.8	35.0	8.4	2.1	0.1	0.1	-	0.0	0.2	0.8	0.2
2019	87,821	25.2	3.3	3.9	5.4	47.6	13.3	2.3	0.1	0.4	0.0	-	0.1	0.6	0.1
2020	80,657	22.8	2	.07	7.2	49.3	13.0	3.1	0.1	0.2	0.1	0	0.1	1.1	0.3
2021	61,315	23.2	1.5	2.8	4.8	41.3	7.2	2.0	0.0	0.1	0.0	0.0	0.0	0.7	0.4
2022	45,088	23.5	1.7	1.1	6.3	53.1	11.6	2.5	0.0	0.9	0.0	0.0	0.1	1.1	0.1
2023	36,204	22.0	1.5	0.6	5.3	49.3	7.8	1.8	0.0	1.0	0.2	0.0	0.1	1.0	0.2
2024	33,896	22.9	1.9	0.6	5.9	45.4	7.0	2.2	0.0	0.17	0.03	0.0	0.1	0.8	0.1

Appendix B.

Missouri furbearer species population indices (sightings/1,000 hours) by county derived from the MDC Bowhunter Observation Survey in 2024.

County	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
Adair	16	0	0	3	35	4	0	0	0	0	0	0	0	0
Andrew	82	4	0	45	115	21	0	0	0	0	0	0	0	0
Atchison	40	0	0	0	0	0	0	0	0	0	0	0	0	0
Audrain	31	0	6	6	145	6	0	0	0	0	0	0	0	0
Barry	47	0	3	0	27	10	3	0	0	0	0	0	0	0
Barton	20	60	0	0	281	0	0	0	0	0	0	0	0	0
Bates	21	0	2	9	97	14	12	0	5	0	0	0	0	0

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County	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
Benton	9	0	0	2	19	7	0	0	0	0	0	0	0	0
Bollinger	4	0	0	0	16	8	0	0	0	0	0	0	6	0
Boone	14	0	0	0	74	20	3	0	0	0	0	0	0	0
Buchanan	138	0	0	18	40	18	0	0	0	0	0	0	0	0
Butler	.	0	0	0	26	13	0	0	0	0	0	0	0	0
Caldwell	19	0	0	0	65	0	0	0	0	0	0	0	0	0
Callaway	18	0	0	8	24	6	0	0	2	0	0	0	0	0
Camden	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Cape Girardeau	15	0	0	3	31	0	0	0	0	0	0	0	3	0
Carroll	40	0	0	0	102	2	0	0	0	0	0	0	0	0
Carter	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Cass	19	6	0	0	124	31	31	0	0	0	0	0	19	0
Cedar	.	0	0	10	20	0	0	0	0	0	0	0	10	0
Chariton	65	0	0	6	45	6	0	0	0	0	0	0	0	0
Christian	9	0	0	9	26	9	0	0	0	0	0	0	0	0
Clark	19	0	0	3	54	8	0	0	0	0	0	0	3	0
Clay	61	11	0	6	73	6	11	0	0	0	0	0	0	0
Clinton	55	0	0	22	60	0	33	0	0	0	0	0	0	0
Cole	46	4	0	14	0	0	0	0	0	0	0	0	0	0
Cooper	13	0	0	13	63	4	0	0	0	0	0	0	0	0
Crawford	14	3	0	3	17	12	0	0	0	0	0	0	0	0

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County	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
Dade	14	0	0	41	68	27	0	0	0	0	0	0	0	0
Dallas	0	0	0	10	10	0	0	0	0	0	0	0	0	0
Daviess	31	0	0	6	25	3	0	0	0	0	0	0	3	0
Dekalb	20	0	0	40	69	0	0	0	0	0	0	0	0	0
Dent	27	0	0	4	4	0	0	0	0	0	0	0	2	0
Douglas	0	0	0	24	0	0	0	0	0	0	0	0	0	0
Dunklin	47	0	0	23	105	0	0	0	0	0	0	0	0	0
Franklin	29	7	1	5	27	11	0	0	0	0	0	0	0	0
Gasconade	5	0	10	0	14	0	0	0	0	0	0	0	0	0
Gentry	34	0	0	0	97	10	0	0	0	0	0	0	0	0
Greene	10	0	0	0	31	10	0	0	0	0	0	0	10	0
Grundy	85	0	0	14	170	0	0	0	0	0	0	0	0	0
Harrison	20	0	0	0	167	15	5	0	0	0	0	0	0	0
Henry	66	0	0	0	47	14	0	0	3	0	0	0	0	0
Hickory	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Holt	22	0	0	0	0	0	0	0	0	0	0	0	0	0
Howard	5	0	0	5	98	5	5	0	0	0	8	0	0	0
Howell	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackson	7	4	0	0	48	7	0	0	0	0	0	0	0	0
Jasper	22	0	0	17	52	0	0	0	4	0	0	0	0	0

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County	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
Jefferson	16	0	0	2	8	0	0	0	0	0	0	0	0	0
Johnson	13	0	0	4	33	4	2	0	0	0	0	0	0	0
Knox	32	0	2	0	103	19	0	0	0	0	0	0	0	0
Laclede	7	0	0	0	20	0	0	0	0	0	0	0	0	7
Lafayette	105	15	0	8	90	23	0	0	0	0	0	0	0	0
Lawrence	95	0	0	0	59	4	0	0	0	0	0	0	0	0
Lewis	9	0	0	0	75	5	0	0	0	0	0	0	0	0
Lincoln	24	2	0	3	39	3	3	0	0	0	0	0	3	0
Linn	41	0	0	0	0	0	0	0	0	0	0	0	0	0
Livingston	0	0	0	6	90	0	0	0	0	0	0	0	0	0
McDonald	0	0	0	4	17	0	13	0	0	0	0	0	0	0
Macon	13	2	0	3	64	10	0	0	0	0	0	0	0	0
Madison	4	0	0	4	0	4	9	0	0	0	0	0	9	0
Maries	0	0	4	0	56	4	4	0	0	0	0	0	0	0
Marion	22	5	0	5	32	11	0	0	0	0	0	0	5	0
Mercer	6	0	0	6	116	6	0	0	0	0	0	0	0	0
Miller	0	0	0	0	16	0	0	0	0	0	0	0	0	0
Mississippi	19	0	0	0	29	0	0	0	0	0	0	0	0	0
Moniteau	41	1	1	8	95	24	4	0	0	0	0	0	0	0
Monroe	29	0	0	8	88	15	0	0	2	0	0	2	0	0
Montgomery	16	0	0	2	8	0	0	0	0	0	0	0	0	0

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County	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
Morgan	15	2	2	0	23	2	0	0	0	0	0	0	0	0
New Madrid	29	0	4	23	12	2	4	0	0	0	0	2	2	0
Newton	30	2	0	7	48	9	9	0	0	0	0	2	0	0
Nodaway	7	7	4	4	43	14	11	0	0	0	0	0	0	0
Oregon	12	0	0	2	2	7	2	0	0	0	0	0	2	0
Osage	0	0	0	11	4	0	0	0	0	0	0	0	0	0
Ozark	23	0	0	7	52	18	0	0	0	0	0	0	0	0
Pemiscot	23	0	0	23	96	18	0	0	0	0	0	0	0	0
Perry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pettis	31	0	1	4	81	13	6	0	0	0	0	0	0	0
Phelps	49	4	0	12	12	16	0	0	0	0	0	0	0	0
Pike	66	0	0	9	94	9	3	0	0	0	0	0	0	0
Platte	14	0	0	0	14	7	7	0	0	0	0	0	0	0
Polk	19	9	0	4	30	34	0	0	0	0	0	0	0	0
Pulaski	11	5	0	3	49	11	0	0	0	0	0	0	0	0
Putnam	23	0	0	0	78	20	0	0	0	0	0	0	0	0
Ralls	29	0	0	0	57	29	0	0	0	0	0	0	0	0
Randolph	23	0	0	0	6	0	0	0	0	0	0	0	0	0
Ray	11	0	0	0	11	11	0	0	0	0	0	0	0	0
Reynolds	15	2	2	0	23	2	0	0	0	0	0	0	0	0
Ripley	29	0	4	23	12	2	4	0	0	0	0	2	2	0

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County	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
St. Charles	15	0	3	2	23	8	6	0	0	3	3	0	0	0
St. Clair	34	0	0	0	19	0	4	0	0	0	0	0	0	0
St. Francois	16	5	0	5	101	11	16	0	0	0	0	0	5	0
Ste. Genevieve	24	3	0	0	34	3	0	0	0	0	0	0	0	0
St. Louis	27	4	0	0	49	2	2	0	0	0	0	0	0	0
Saline	12	0	12	23	46	0	0	0	0	0	0	0	0	0
Schuyler	28	0	0	3	71	8	3	0	0	0	0	0	0	0
Scotland	8	0	0	3	49	10	0	0	0	0	0	0	0	0
Scott	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shannon	25	0	0	3	23	0	0	0	0	0	0	0	0	0
Shelby	9	0	0	0	57	9	0	0	0	0	0	3	0	0
Stoddard	9	0	0	17	17	0	0	0	0	0	0	0	0	0
Stone	17	4	0	0	35	17	4	0	0	0	0	0	0	0
Sullivan	18	4	0	9	57	9	0	0	0	0	0	0	0	0
Taney	5	0	10	10	10	10	10	0	0	0	0	0	0	0
Texas	0	0	0	0	4	0	0	0	0	0	0	0	0	0
Vernon	61	0	0	6	61	6	0	0	0	0	0	0	0	0
Warren	10	2	4	2	22	4	0	0	0	0	0	0	0	0
Washington	5	5	0	14	0	0	14	0	0	0	0	0	0	0
Wayne	3	0	0	3	0	0	0	0	3	0	0	0	0	0
Webster	0	22	0	11	0	11	0	0	0	0	0	0	0	0

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County	Coyote	Red Fox	Gray Fox	Bobcat	Raccoon	Virginia Opossum	Striped Skunk	Mink	Beaver	Muskrat	Weasel	Badger	River Otter	Black Bear
Worth	0	0	0	0	8	8	0	0	0	0	0	0	0	0
Wright	10	5	0	5	0	5	0	0	0	0	0	0	0	0
Statewide Index	22.9	1.9	0.6	5.9	45.4	7.0	2.2	0.0	0.17	0.03	0.0	0.1	0.8	0.1